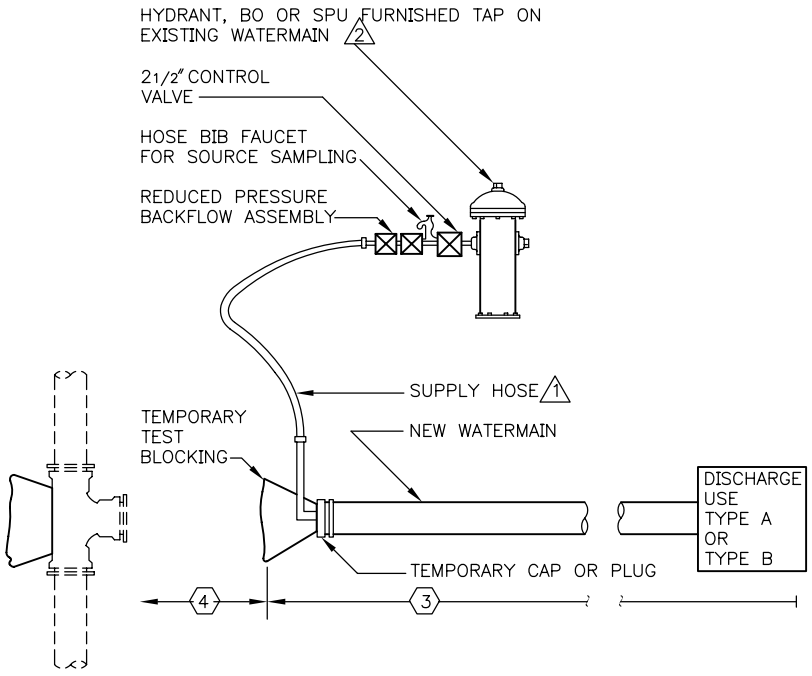
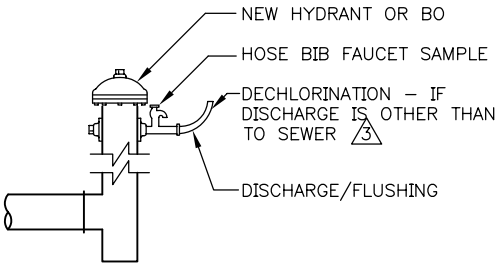
REV DATE: 2003

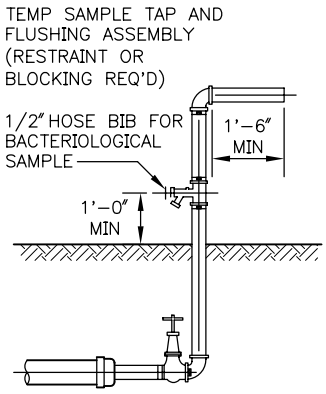



DETAIL 1

TEMPORARY FLUSHING/TESTING CONN




TYPE A




TYPE B

## NOTES

1. ALL FITTINGS SHALL BE DUCTILE IRON
2. ALL EXCAVATION SHALL PROVIDE A MINIMUM OF 1'–0" CLEAR AROUND PIPE AND FITTINGS.
3. THESE PLANS ARE FOR DIP AND CIP WATERMAINS 12" OR SMALLER DIA OTHER SIZES AND TYPES SEE PROJECT DRAWINGS
4. REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE INSTALLED AS A UNIT (TWO SHUT–OFF VALVES, RELIEF PORT, TWO CHECK VALVES AND FOUR TEST COCKS). WHEN RPBA IS CONNECTED TO HYDRANT AND THE HOSE BIB FAUCET SAMPLE THEY SHALL BE CAPPED WHEN NOT IN USE. ASSEMBLY SHALL BE TESTED WHEN INSTALLED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER (BAT) AND A CURRENT TEST REPORT SHALL BE ON SITE. FOR INSTALLATION PROCEDURES CALL 684–3536.

## LEGEND

△1 CLEAN & DISINFECTED POTABLE WATER HOSE ONLY. SIZE FLUSHING RISER PER TABLE IN STD SPEC SEC 7–11.3(12)

△2 HYDRANT PERMIT REQUIRED

△3 CHECK WITH SEWER UTILITY BEFORE DISCHARGE TO SEWERS

⟨1⟩ CONTRACTOR TO DETERMINE ALIGNMENT & GRADE OF EXISTING PIPE PRIOR TO INSTALLING NEW WATERMAIN. ENGINEER TO DETERMINE OUTSIDE DIAMETER OF EXISTING PIPE WHEN CONTRACTOR EXCAVATES TO DETERMINE ALIGNMENT & GRADE.

⟨2⟩ ALL EXCAVATION, PIPE, FITTINGS (EXCEPT AS NOTED BELOW), OTHER MATERIAL, BEDDING, BACKFILL, COMPACTION & STREET RESTORATION BY CONTRACTOR. ALL MATERIALS SHALL BE ON JOB SITE PRIOR TO SHUTDOWN OF EXISTING MAIN.

⟨3⟩ INSTALLED BY CONTRACTOR

⟨4⟩ CONNECTION PIPE: CONTRACTOR FURNISHED, INSTALLED BY SPU

⟨5⟩ WATERMAIN WITH PLAIN ENDS

⟨6⟩ MECHANICAL JOINT SLEEVE WITH SPACER CUT TO FIT GAP, FURNISHED AND INSERTED AT TIME OF CONNECTION BY SPU

⟨7⟩ TAPPING SLEEVE & TAPPING VALVE FURNISHED AND INSTALLED BY SPU

⟨8⟩ APPLIES TO PIPES 4" THROUGH 12". ALL LARGER SIZES TO BE ADDRESSED ON DRAWINGS

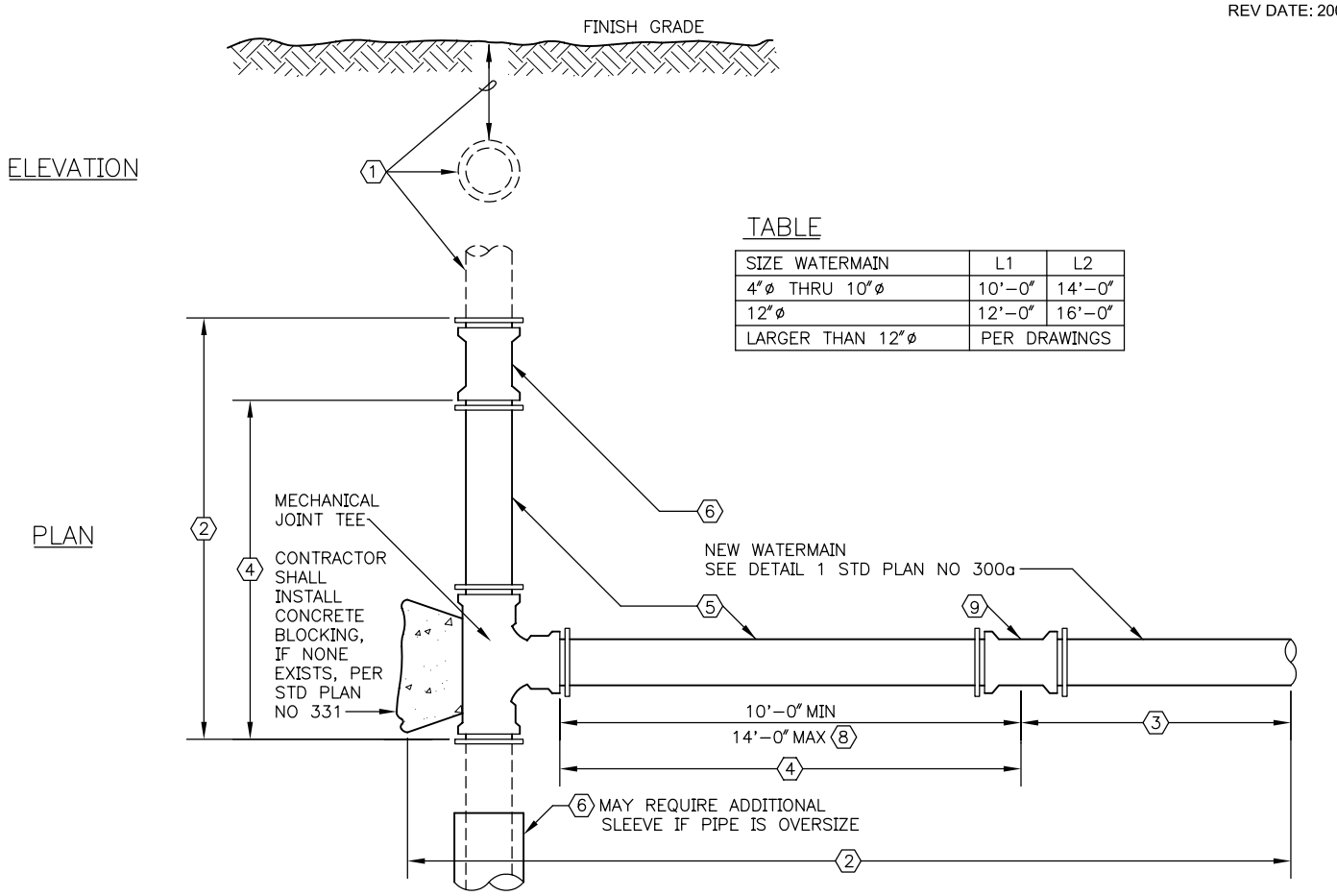
⟨9⟩ MECHANICAL JOINT SLEEVE, FURNISHED BY CONTRACTOR AND INSTALLED BY SPU, SPACERS BY SPU WHERE REQUIRED

REF STD SPEC SEC 7-11

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | CONNECTIONS TO EXISTING WATERMAINS |

# STANDARD PLAN NO 300b

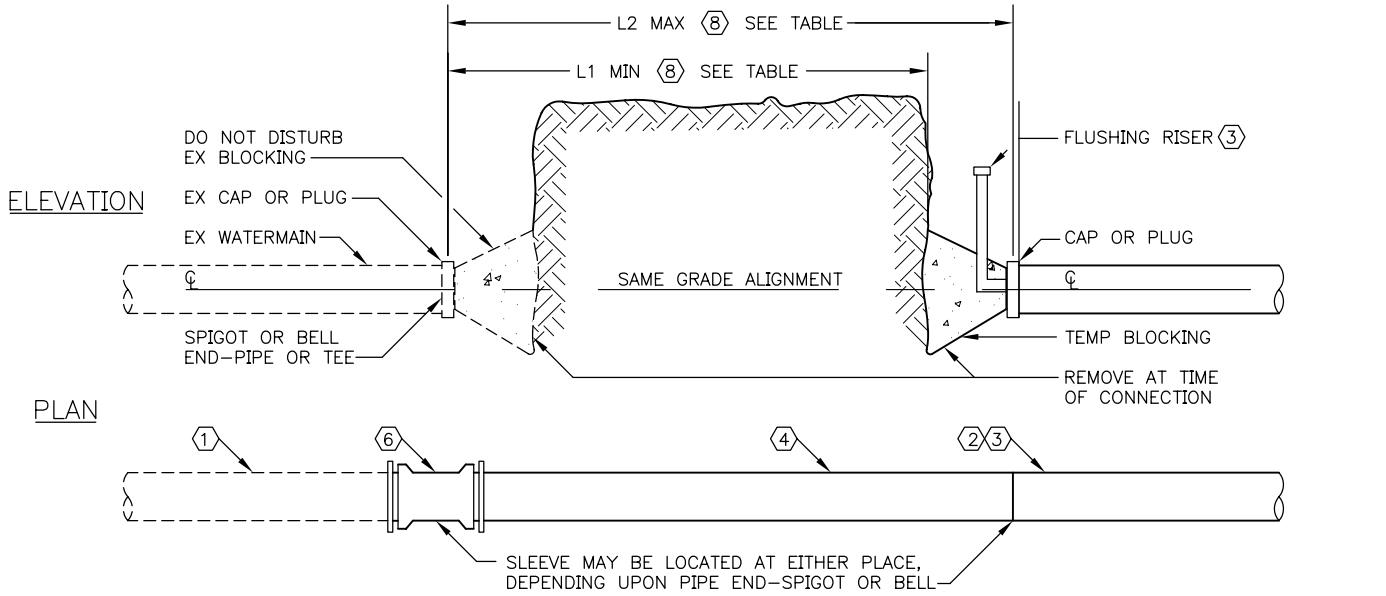
REV DATE: 2003




TABLE

| SIZE WATERMAIN | L1 | L2 |
|---|---|---|
| 4"ø THRU 10"ø | 10'–0" | 14'–0" |
| 12"ø | 12'–0" | 16'–0" |
| LARGER THAN 12"ø | PER DRAWINGS | |

CONNECTIONS TO EXISTING MAIN, WITH A NEW TEE OR CROSS
(CUT IN NEW TEE)



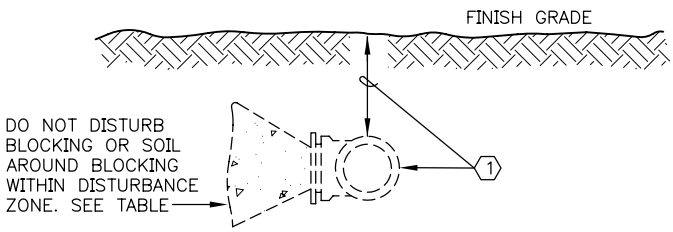

CONNECTIONS TO EXISTING MAIN, STUB OR END OUTLET OF TEE OR CROSS

REF STD SPEC SEC 7-11

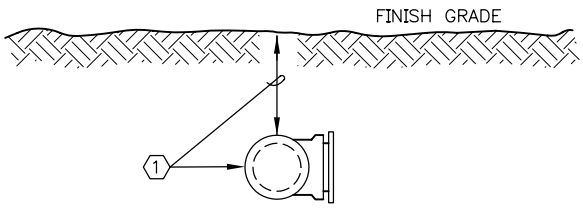
FOR LEGEND ⬡ AND NOTES SEE STD PLAN NO 300a

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | CONNECTIONS TO EXISTING WATERMAINS |

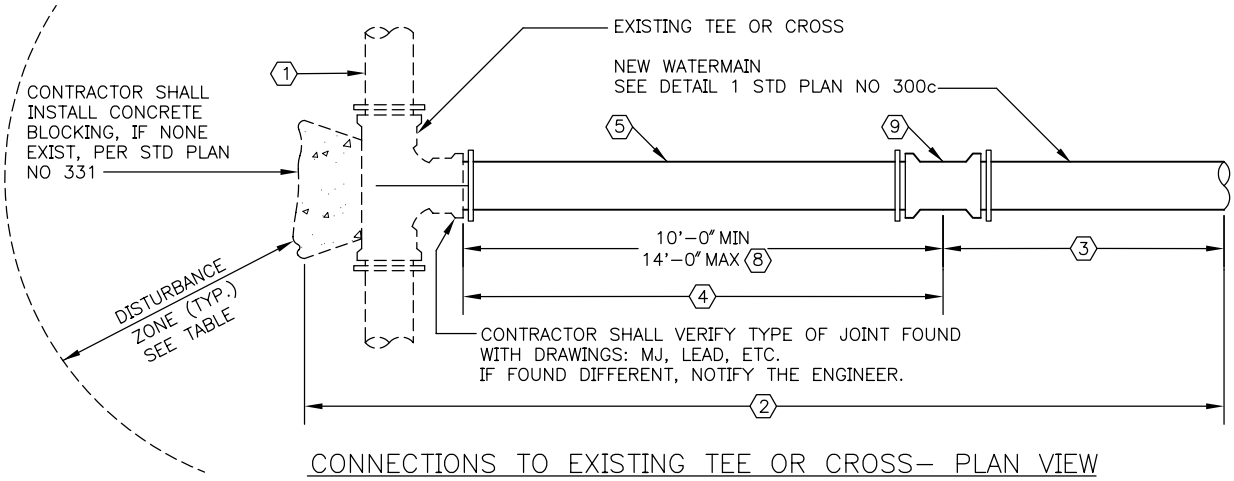
REV DATE: 2003




EXISTING PLUGGED TEE OR CROSS




NEW PLUGGED TEE OR CROSS

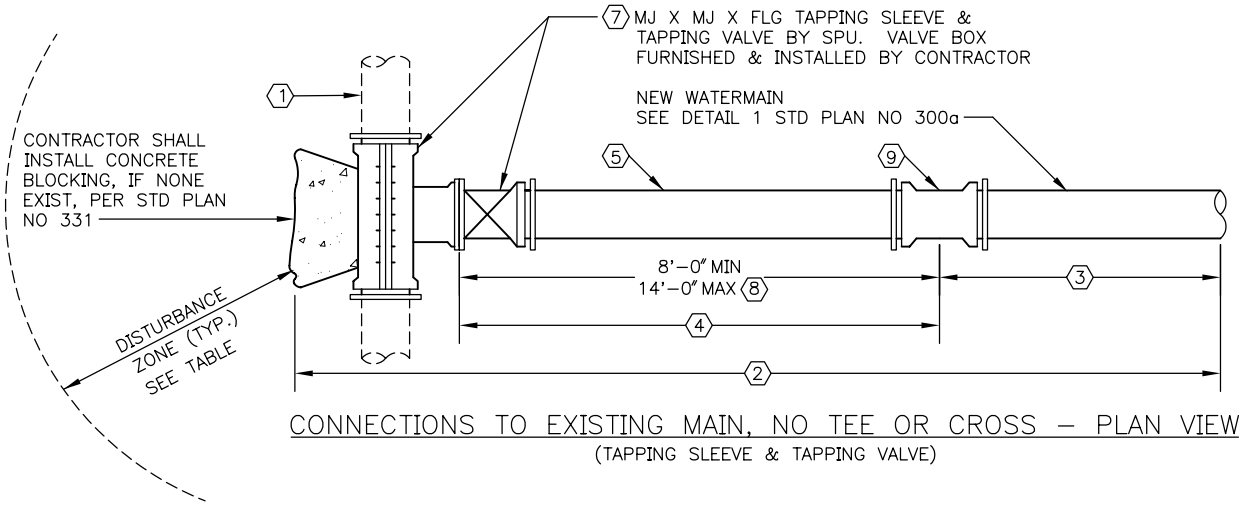



CONNECTIONS TO EXISTING TEE OR CROSS– PLAN VIEW

TABLE

| SIZE WATERMAIN | DISTURBANCE ZONE |
|---|---|
| UP TO & INCLUDING 10"ø | 10'–0" |
| OVER 10"ø | 12'–0" |

* SPU MAY INCREASE DISTURBANCE ZONE.
SEE CONTRACT DOCUMENTS




CONNECTIONS TO EXISTING MAIN, NO TEE OR CROSS – PLAN VIEW
(TAPPING SLEEVE & TAPPING VALVE)

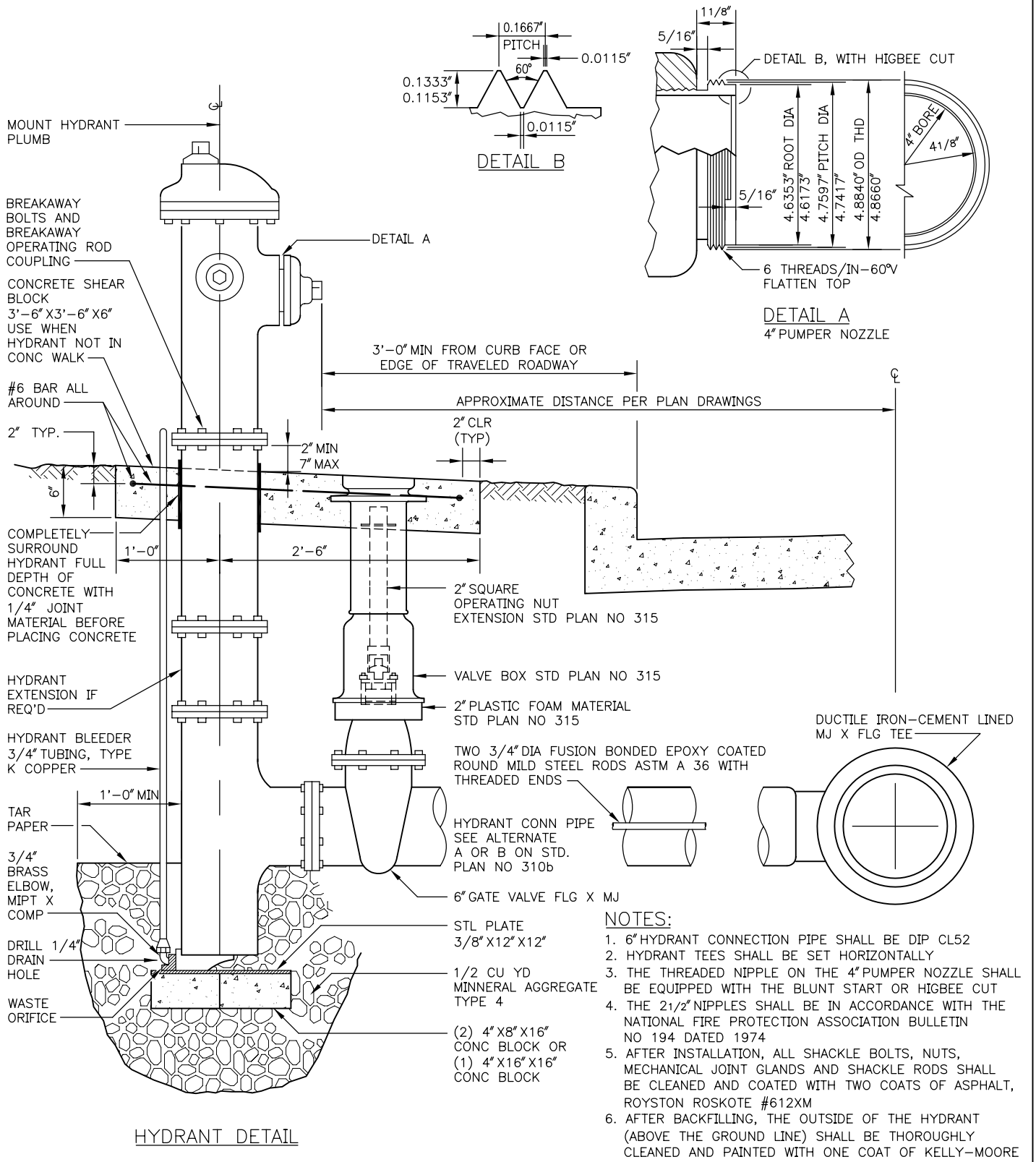
REF STD SPEC SEC 7-11

FOR LEGEND ⬡ AND NOTES SEE STD PLAN NO 300a

| City of Seattle | NOT TO SCALE | CONNECTIONS TO EXISTING WATERMAINS |
|---|---|---|

# STANDARD PLAN NO 310a

REV DATE: 2005




HYDRANT DETAIL

## NOTES:

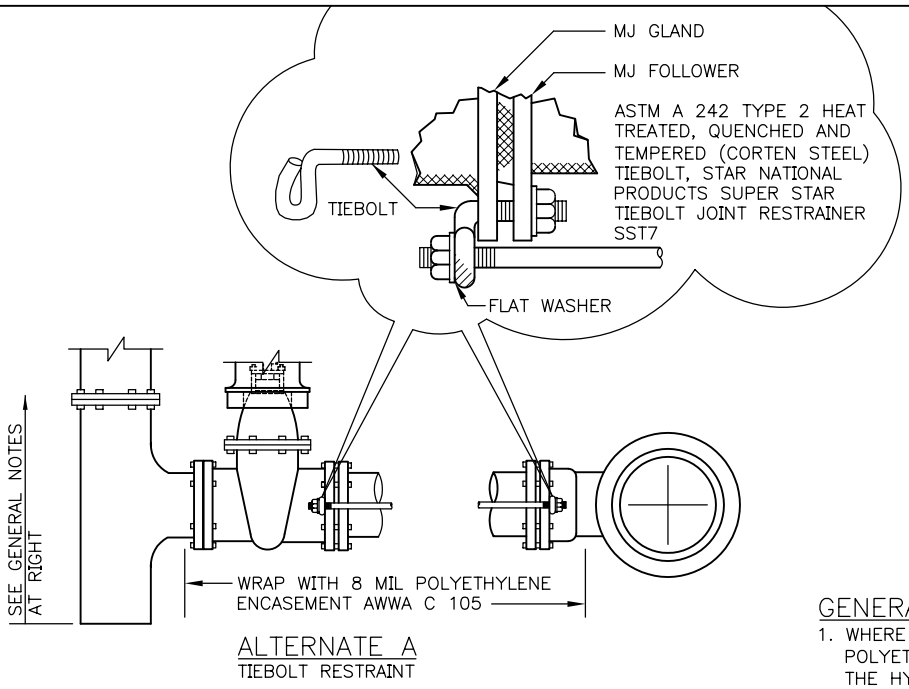
1. 6″ HYDRANT CONNECTION PIPE SHALL BE DIP CL52
2. HYDRANT TEES SHALL BE SET HORIZONTALLY
3. THE THREADED NIPPLE ON THE 4″ PUMPER NOZZLE SHALL BE EQUIPPED WITH THE BLUNT START OR HIGBEE CUT
4. THE 2 1/2″ NIPPLES SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN NO 194 DATED 1974
5. AFTER INSTALLATION, ALL SHACKLE BOLTS, NUTS, MECHANICAL JOINT GLANDS AND SHACKLE RODS SHALL BE CLEANED AND COATED WITH TWO COATS OF ASPHALT, ROYSTON ROSKOTE #612XM
6. AFTER BACKFILLING, THE OUTSIDE OF THE HYDRANT (ABOVE THE GROUND LINE) SHALL BE THOROUGHLY CLEANED AND PAINTED WITH ONE COAT OF KELLY–MOORE LUXLITE 43–616 CAT YELLOW
7. PUMPER PORT TO FACE CURB
8. WEDGE RESTRAINT SYSTEM MAY BE USED IN LIEU OF SHACKLE RODS. SEE STD SPEC SEC 9–30.5(5).

REF STD SPEC SEC 7-14

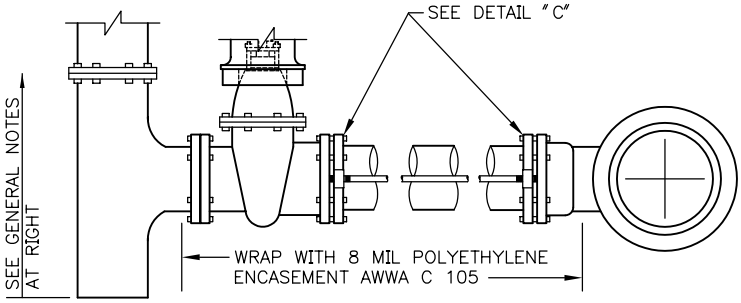
| City of Seattle | NOT TO SCALE | TYPE 310 HYDRANT SETTING DETAIL |
|---|---|---|

# STANDARD PLAN NO 310b

REV DATE: 2003



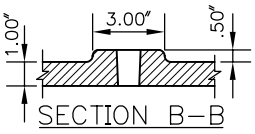

ALTERNATE A
TIEBOLT RESTRAINT



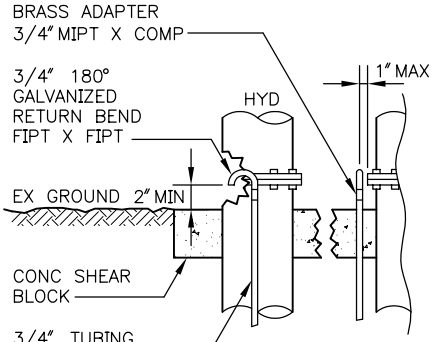

ALTERNATE B
MECHANICAL JOINT GLAND W/LUGS

## GENERAL NOTES:

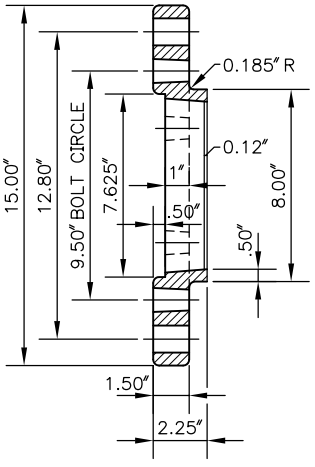
1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARRIER SHALL BE TAPE COATED
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING–PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a



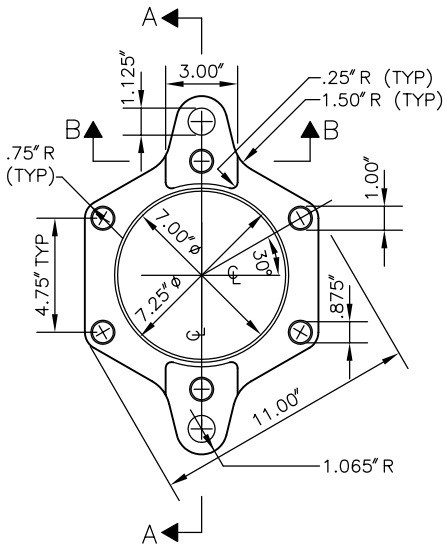

SECTION B–B




DETAIL D
HYDRANT BLEEDER




SECTION A–A




DETAIL C
6" MECHANICAL JOINT GLAND W/ LUGS

## DETAIL C NOTES:

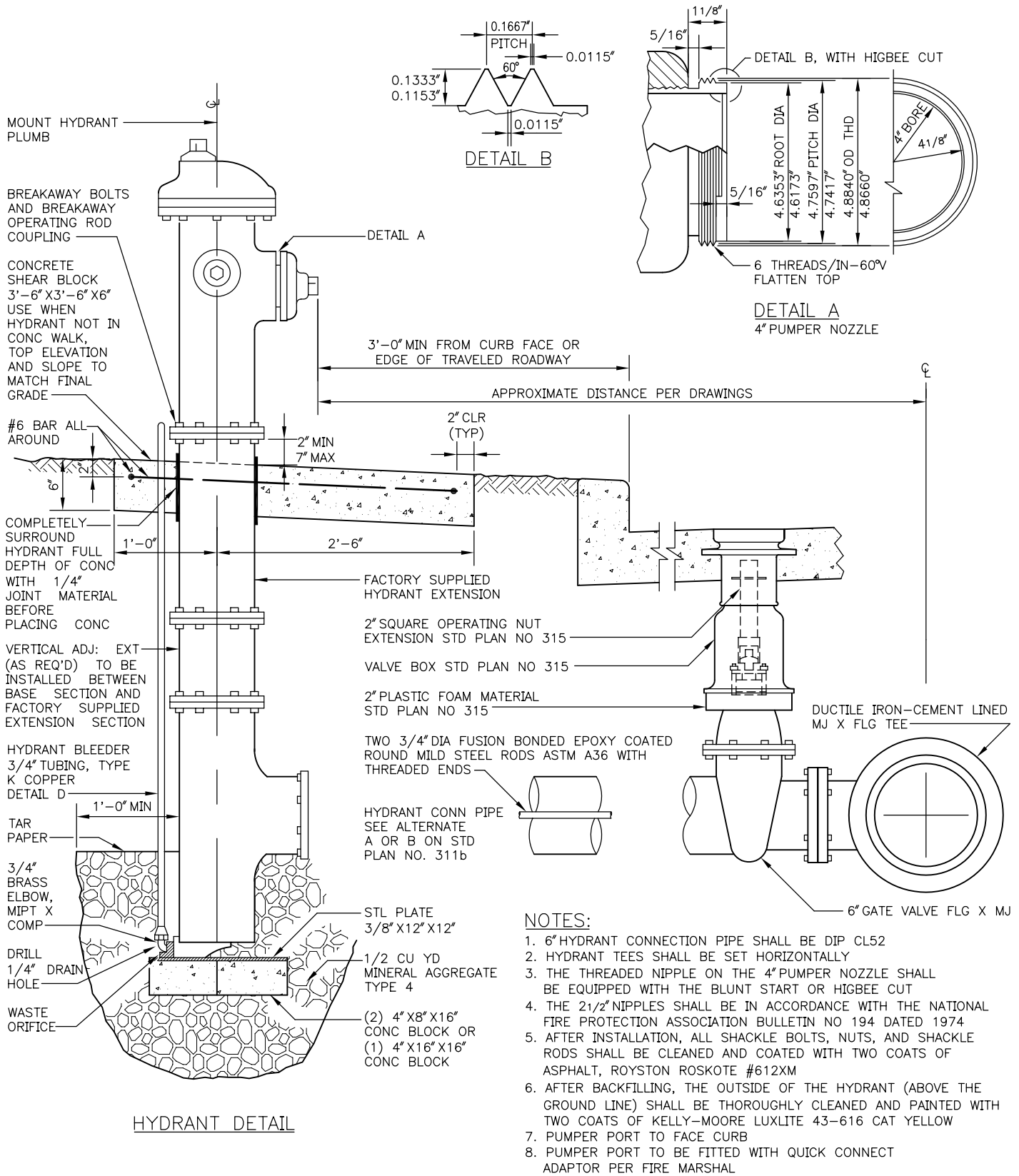
1. TO BE CAST OF DUCTILE IRON IN CONFORMANCE WITH ASTM A 536 CLASS 80–55–06
2. AFTER CLEANING, THE CASTING SHALL BE HOT DIPPED IN ASPHALTIC VARNISH, ROYSTON ROSKOTE #612XM
3. TOLERANCES PER DIPRA HANDBOOK

REF STD SPEC SEC 7-14

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | TYPE 310 HYDRANT SETTING DETAIL |

# STANDARD PLAN NO 311a

REV DATE: 2005




HYDRANT DETAIL

## NOTES:

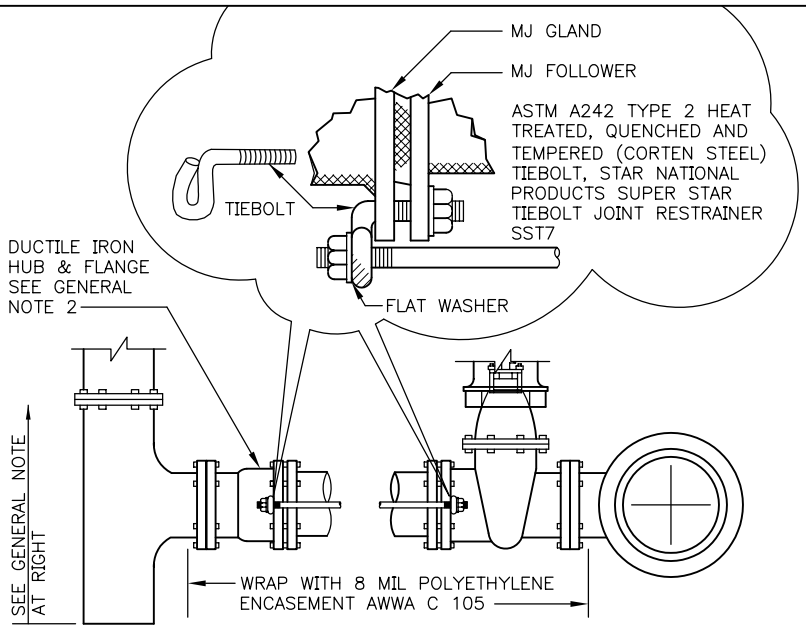
1. 6″ HYDRANT CONNECTION PIPE SHALL BE DIP CL52
2. HYDRANT TEES SHALL BE SET HORIZONTALLY
3. THE THREADED NIPPLE ON THE 4″ PUMPER NOZZLE SHALL BE EQUIPPED WITH THE BLUNT START OR HIGBEE CUT
4. THE 2 1/2″ NIPPLES SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN NO 194 DATED 1974
5. AFTER INSTALLATION, ALL SHACKLE BOLTS, NUTS, AND SHACKLE RODS SHALL BE CLEANED AND COATED WITH TWO COATS OF ASPHALT, ROYSTON ROSKOTE #612XM
6. AFTER BACKFILLING, THE OUTSIDE OF THE HYDRANT (ABOVE THE GROUND LINE) SHALL BE THOROUGHLY CLEANED AND PAINTED WITH TWO COATS OF KELLY–MOORE LUXLITE 43–616 CAT YELLOW
7. PUMPER PORT TO FACE CURB
8. PUMPER PORT TO BE FITTED WITH QUICK CONNECT ADAPTOR PER FIRE MARSHAL
9. WEDGE RESTRAINT SYSTEM MAY BE USED IN LEIU OF SCHACKLE RODS. SEE STD SPEC SEC 9–30.5(5).

REF STD SPEC SEC 7-14

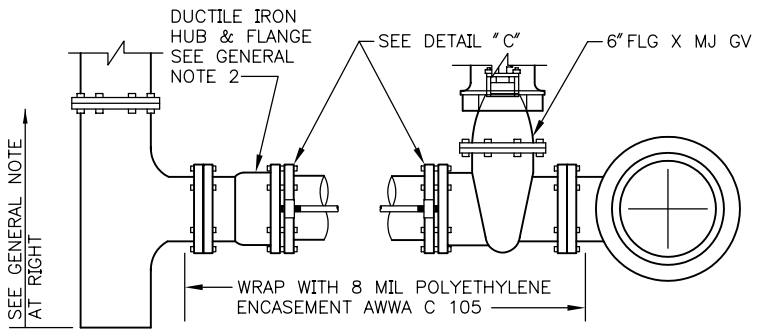
| City of Seattle | NOT TO SCALE | TYPE 311 HYDRANT SETTING DETAIL |
|---|---|---|

# STANDARD PLAN NO 311b

REV DATE: 2003



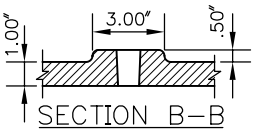

ALTERNATE A
TIEBOLT RESTRAINT



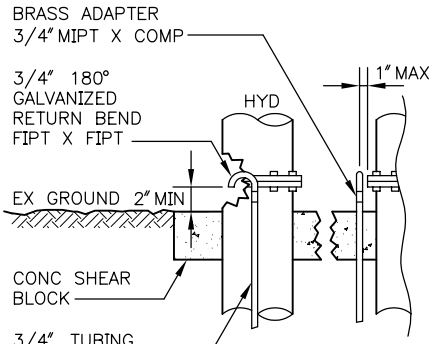

ALTERNATE B
MECHANICAL JOINT GLAND W/LUGS

## GENERAL NOTES:

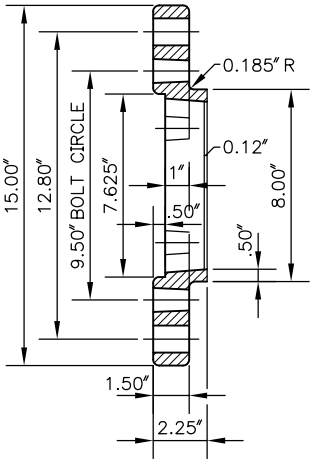
1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARREL SHALL BE TAPE COATED
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING–PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a



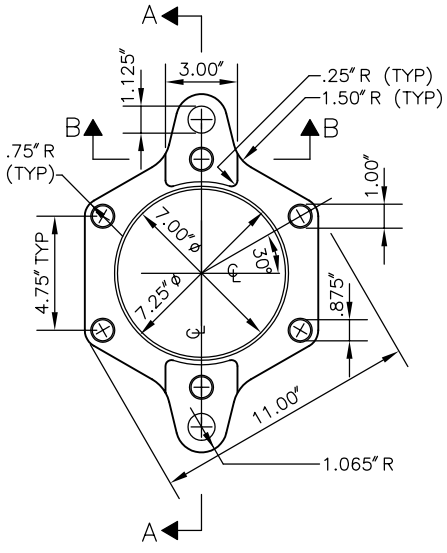

SECTION B–B




DETAIL D
HYDRANT BLEEDER




SECTION A–A




DETAIL C
6" MECHANICAL JOINT GLAND W/ LUGS

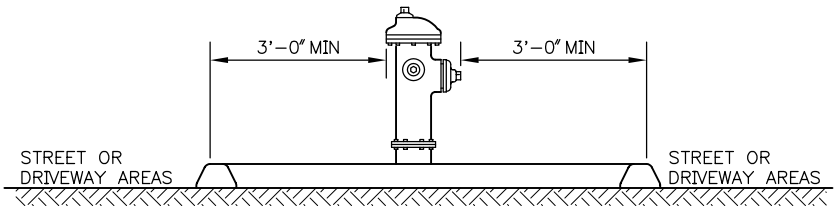
## DETAIL C NOTES:

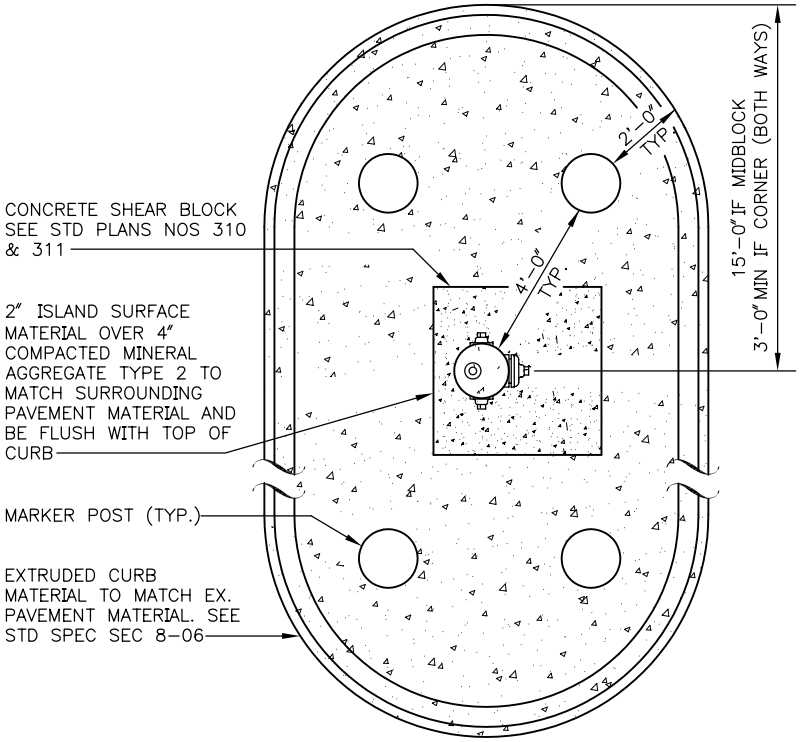
1. TO BE CAST OF DUCTILE IRON IN CONFORMANCE WITH ASTM A 536 CLASS 80–55–06
2. AFTER CLEANING, THE CASTING SHALL BE HOT DIPPED IN ASPHALTIC VARNISH, ROYSTON ROSKOTE #612XM
3. TOLERANCES PER DIPRA HANDBOOK

REF STD SPEC SEC 7-14

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | TYPE 311 HYDRANT SETTING DETAIL |

REV DATE: 2003

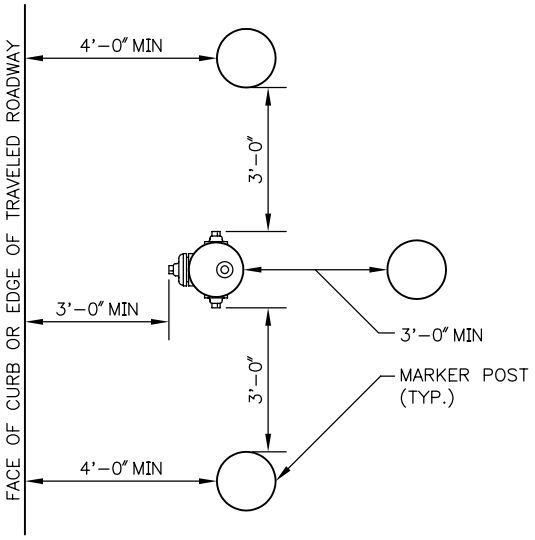



TRAFFIC ISLAND MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

NOTES

1. LAYOUT OF MARKER POST SHALL BE VERIFIED FIRST WITH SPU AND SEATRAN
2. MARKER POST WITH HIGH INTENSITY REFLECTORIZED BANDS PROVIDED BY SPU



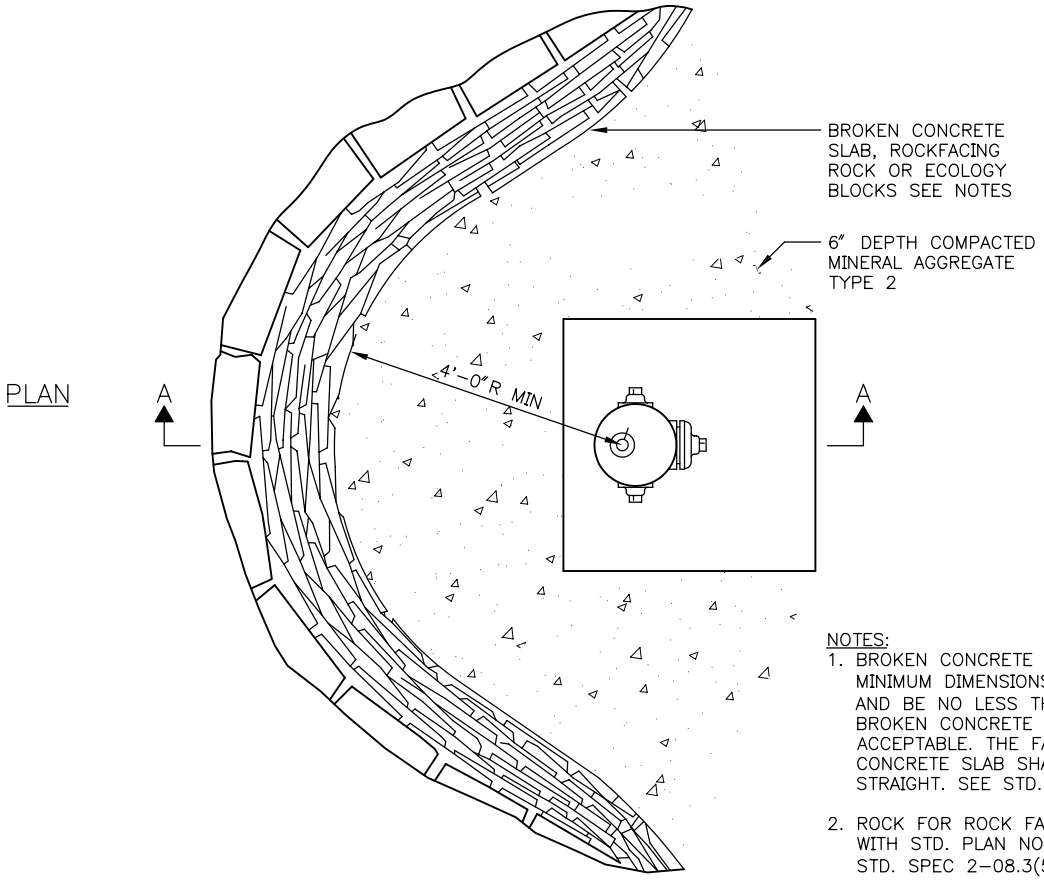

MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

REF STD SPEC SEC 7-14

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | FIRE HYDRANT MARKER LAYOUT |

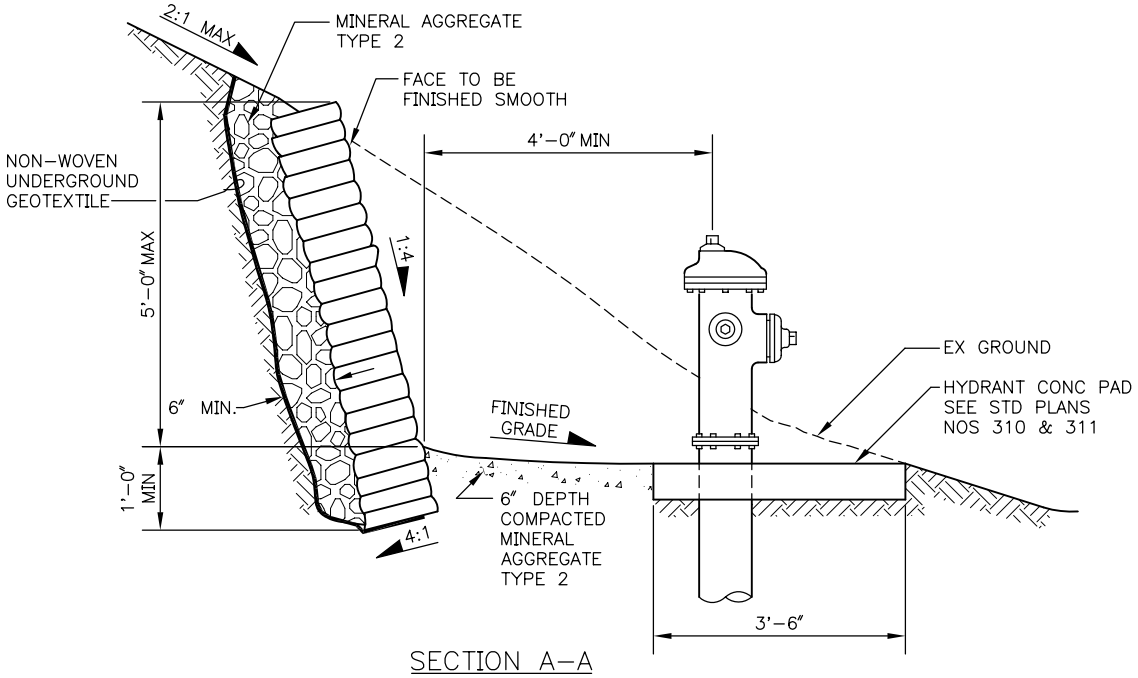
# STANDARD PLAN NO 313

REV DATE: 2003




NOTES:

1. BROKEN CONCRETE SLABS SHALL HAVE MINIMUM DIMENSIONS OF 3'-0" x 1'-6" AND BE NO LESS THAN 3 1/2" THICK. BROKEN CONCRETE SIDEWALK IS ACCEPTABLE. THE FACE SIDE OF CONCRETE SLAB SHALL BE STRAIGHT. SEE STD. SPEC SEC 8-15.3(5)A
2. ROCK FOR ROCK FACING SHALL COMPLY WITH STD. PLAN NO. 141 SEE STD. SPEC 2-08.3(5)



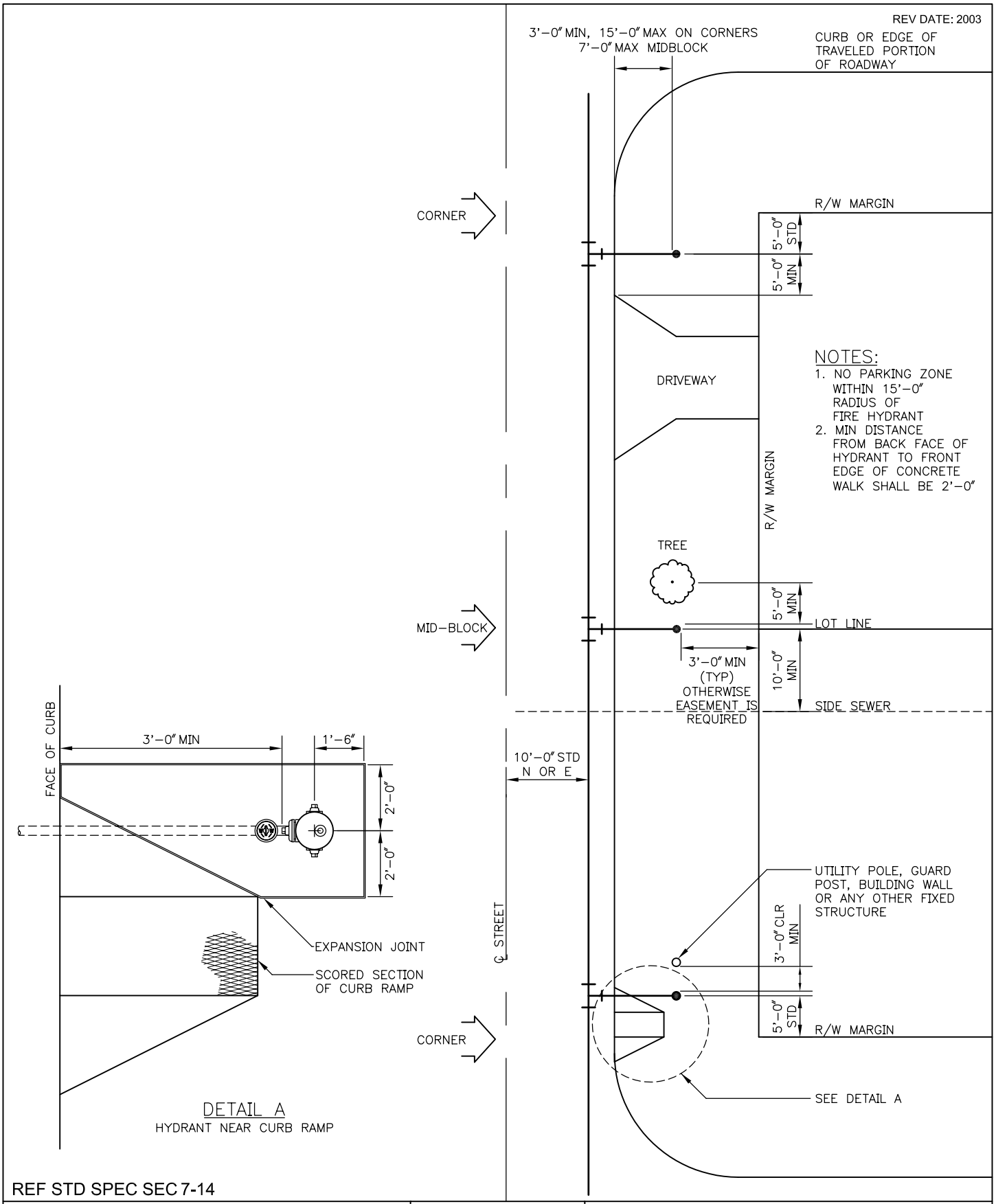

SECTION A-A

REF STD SPEC SEC 2-08, 7-14 & 8-15

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | WALL REQUIREMENTS FOR HYDRANTS |

# STANDARD PLAN NO 314

REV DATE: 2003

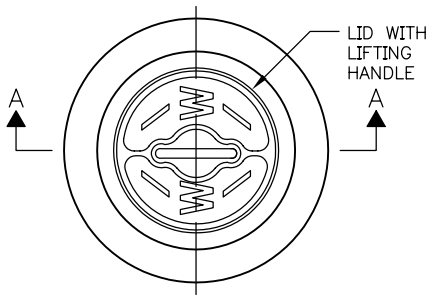



REF STD SPEC SEC 7-14

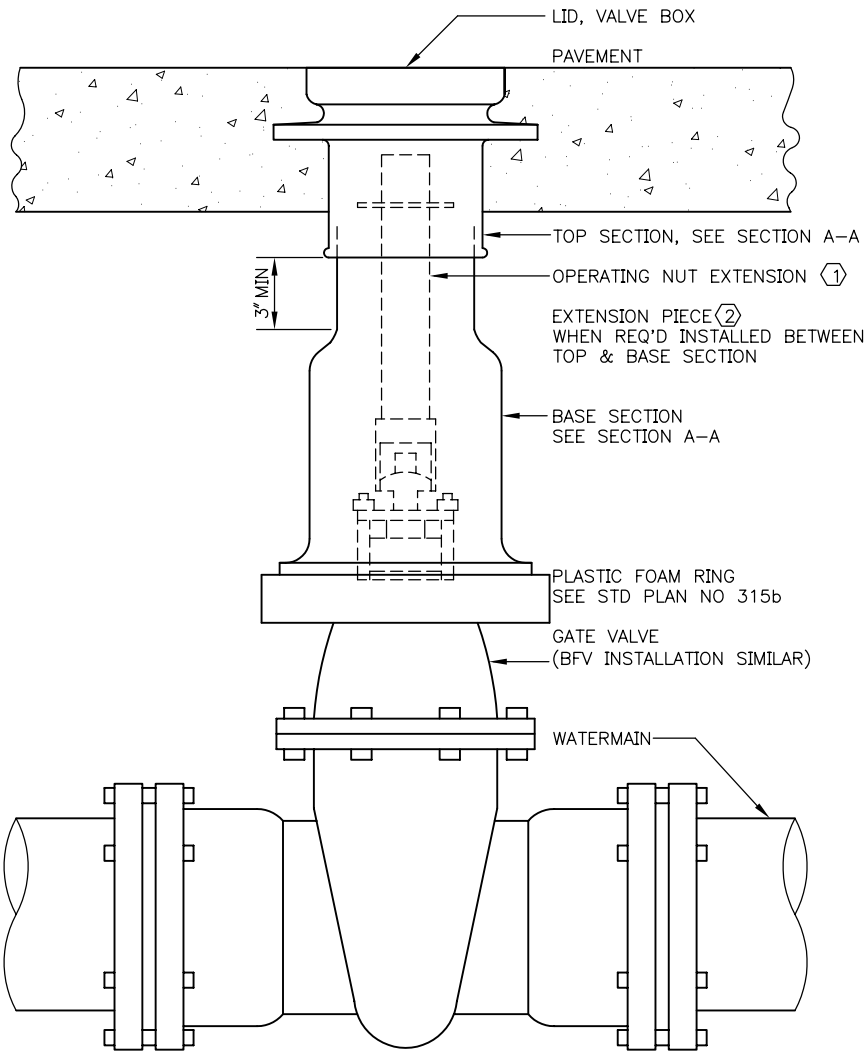
| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | FIRE HYDRANT LOCATIONS & CLEARANCES |

# STANDARD PLAN NO 315a

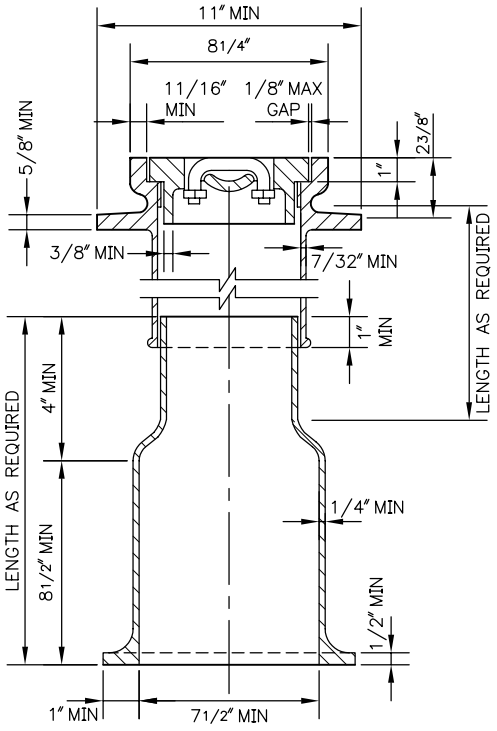
REV DATE: 2003




PLAN




VALVE BOX ASSEMBLY
TYPICAL SETTING DETAIL




SECTION A–A

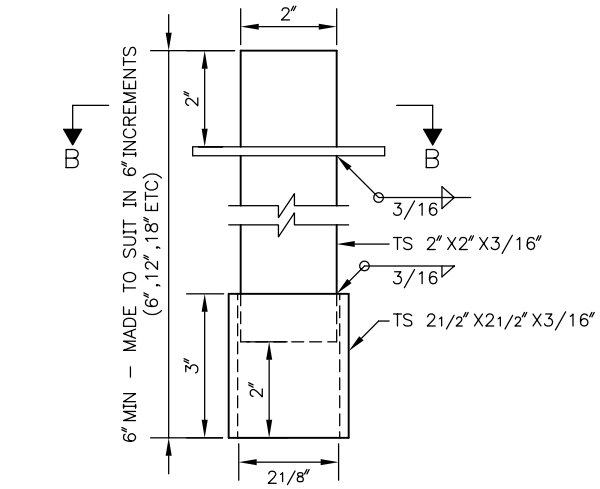
NOTE:
VALVE BOX FOR USE ON 12" OR SMALLER VALVE INSTALLATIONS

REF STD SPEC SEC 7-12

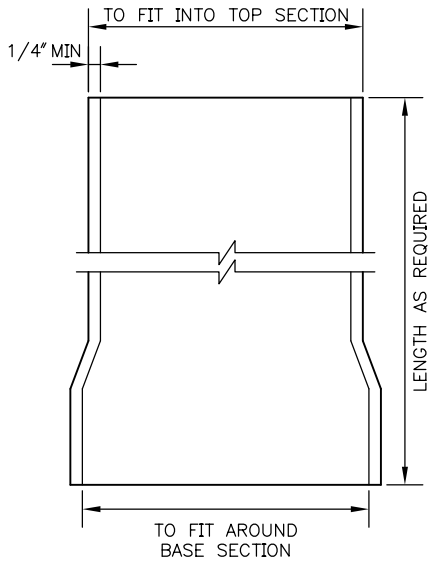
FOR LEGEND ⬡ AND NOTES SEE STD PLAN NO 315b

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | CAST IRON VALVE BOX & OPERATING NUT EXTENSION |

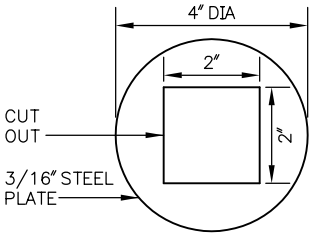
REV DATE: 2003



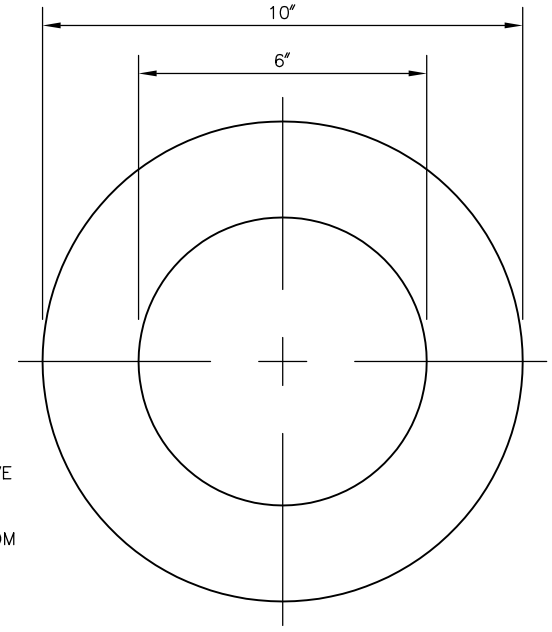

OPERATING NUT EXTENSION DETAIL 1




EXTENSION PIECE 2
WHEN REQUIRED




SECTION B–B


PLASTIC FOAM RING DETAIL

NOTES:

1. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY
2. CASTINGS AND EXTENSIONS SHALL BE HOT–DIPPED IN ASPHALTIC VARNISH ROYSTON ROSKOTE #612XM OR 2 COATS OF MASTIC ROYSTON INSIDE AND OUT.
3. VALVE BOXES SHALL BE RICH #045: TOP SECTION, LID AND BASE; OR OLYMPIC FOUNDRY: LID #1908–33, TOP SECTION #1106–33, BASE SECTION #1301–33
4. ALL CASTINGS SHALL BE DUCTILE OR GREY CAST IRON

LEGEND:

(1) AN OPERATING NUT EXTENSION SHALL BE INSTALLED WHEN THE GROUND SURFACE IS MORE THAN 2′–6″ ABOVE THE VALVE OPERATING NUT. THE OPERATING NUT EXTENSION SHALL EXTEND INTO THE TOP SECTION OF THE STANDARD VALVE BOX AND SHALL CLEAR THE BOTTOM OF THE LID BY 6″ MIN

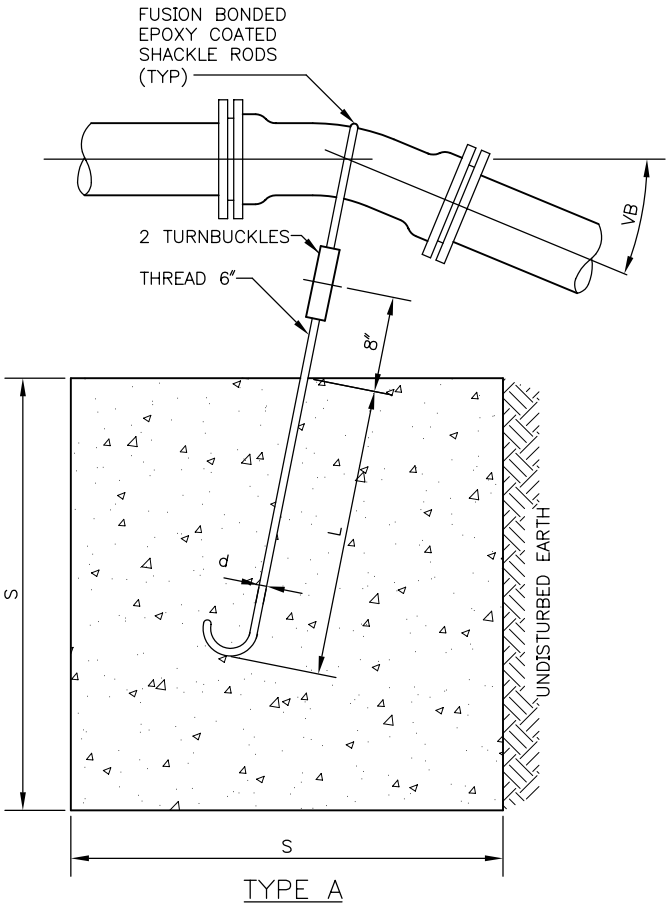
(2) EXTENSION PIECES (WHEN USED) SHALL CONFORM TO MINIMUM THICKNESS REQUIREMENTS AND SHALL FIT INTO THE TOP SECTION AND OVER THE BOTTOM SECTION

REF STD SPEC SEC 7-12 & 9-30

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | CAST IRON VALVE BOX & OPERATING NUT EXTENSIONS |

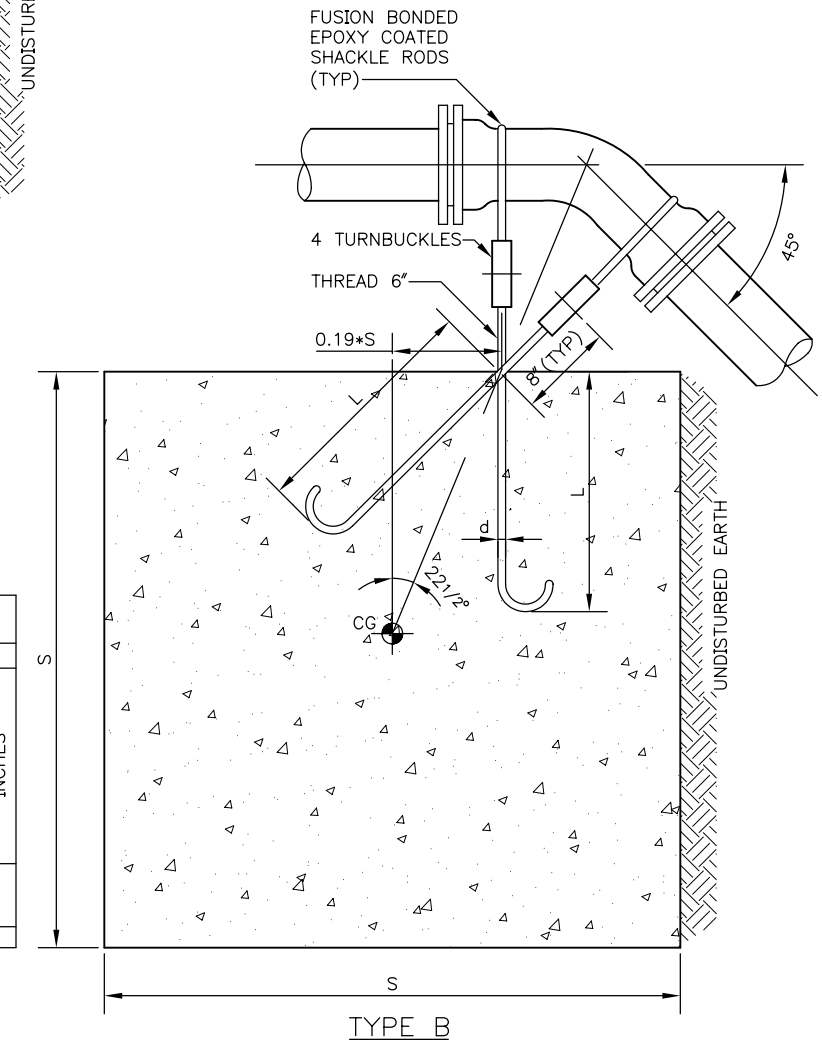
# STANDARD PLAN NO 330a

REV DATE: 2003




TYPE A

| TYPE A BLOCKING FOR 11 1/4° & 22 1/2° VERTICAL BENDS | | | | | | |
|---|---|---|---|---|---|---|
| | | VB | | S | d | L |
| PIPE SIZE NOM DIA INCHES | TEST PRESSURE PSI | VERTICAL BEND DEGREES | NO OF CU FT OF CONC BLOCKING | SIDE OF CUBE FEET | DIA OF SHACKLE RODS (2) INCHES | DEPTH OF RODS IN CONCRETE INCHES |
| 4" | 300 | 11 1/4 | 8 | 2 | 3/4 | 18 |
| | | 22 1/2 | 12 | 2 1/4 | | 24 |
| 6" | 300 | 11 1/4 | 12 | 2 1/4 | 3/4 | 24 |
| | | 22 1/2 | 27 | 3 | | |
| 8" | 300 | 11 1/4 | 16 | 2 1/2 | 3/4 | 24 |
| | | 22 1/2 | 43 | 3 1/2 | | |
| 12" | 300 | 11 1/4 | 64 | 4 | 1 | 24 |
| | | 22 1/2 | 125 | 5 | 1 | 36 |




TYPE B

| TYPE B BLOCKING FOR 45° VERTICAL BENDS | | | | | | |
|---|---|---|---|---|---|---|
| | | VB | | S | d | L |
| PIPE SIZE NOM DIA INCHES | TEST PRESSURE PSI | VERTICAL BEND DEGREES | NO OF CU FT OF CONC BLOCKING | SIDE OF CUBE FEET | DIA OF SHACKLE RODS (4) INCHES | DEPTH OF RODS IN CONCRETE INCHES |
| 4" | 300 | 45 | 27 | 3 | 3/4 | 20 |
| 6" | | | 64 | 4 | | |
| 8" | | | 125 | 5 | | |
| 12" | | | 216 | 6 | 1 | 30 |

FOR NOTES SEE STD PLAN NO 330b

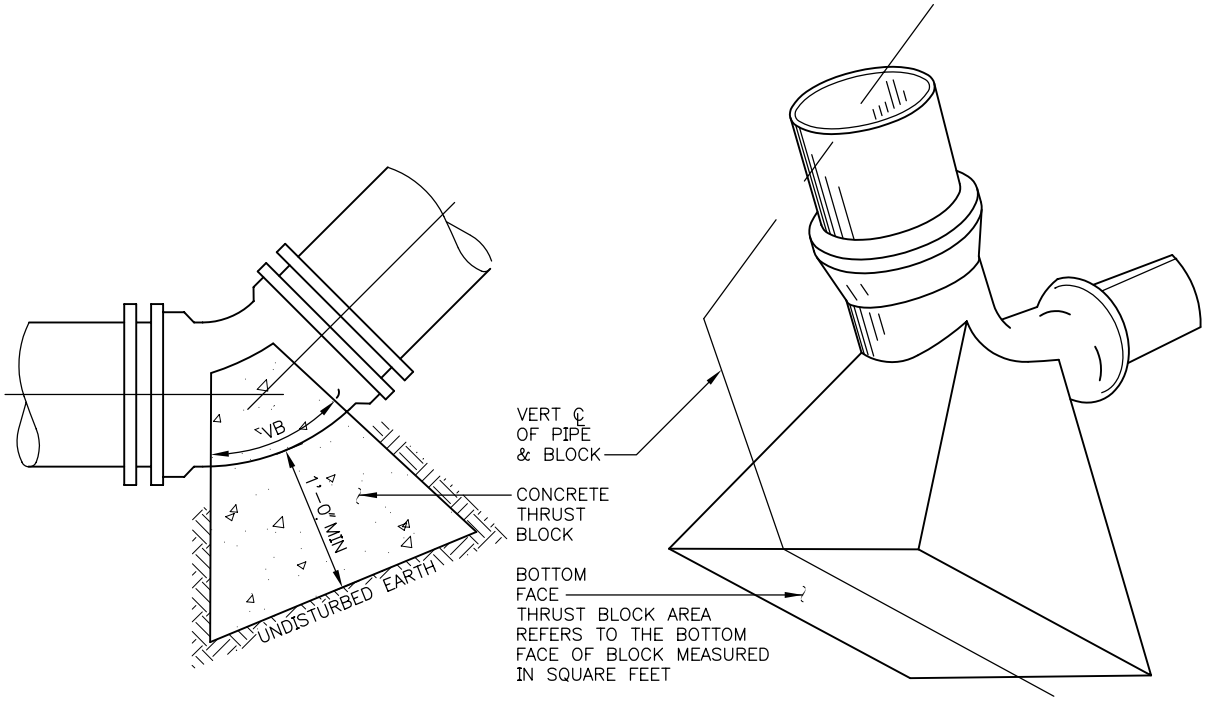
REF STD SPEC SEC 7-11

City of Seattle

NOT TO SCALE

WATERMAIN THRUST BLOCKING
VERTICAL FITTINGS

REV DATE: 2003




TYPE C

| TYPE "C" BLOCKING FOR 11 1/4°, 22 1/2°, 45° AND 90° VERTICAL BENDS THRUST BLOCK AREA IN SQUARE FEET | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SOIL | FIRM SILT OR FIRM SILTY SAND | | | COMPACT SAND | | | COMPACT SAND & GRAVEL | | |
| PIPE SIZE / FITTING | 90° BEND | TEE 45°BEND & DEAD END | 11 1/4° & 22 1/2° BEND | 90° BEND | TEE 45°BEND & DEAD END | 11 1/4° & 22 1/2° BEND | 90° BEND | TEE 45°BEND & DEAD END | 11 1/4° & 22 1/2° BEND |
| 4" | 5.8 | 4.2 | 1.7 | 2.9 | 2.1 | 1.0 | 2.2 | 1.6 | 1.0 |
| 6" | 13.3 | 9.4 | 3.8 | 6.7 | 4.7 | 1.9 | 5.0 | 3.5 | 1.4 |
| 8" | 23.3 | 16.7 | 6.7 | 11.7 | 8.4 | 3.4 | 8.8 | 6.3 | 2.5 |
| 12" | 53.0 | 37.5 | 15.0 | 26.5 | 18.8 | 7.5 | 20.0 | 14.0 | 5.6 |
| AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN | | | | | | | | | |

NOTES:

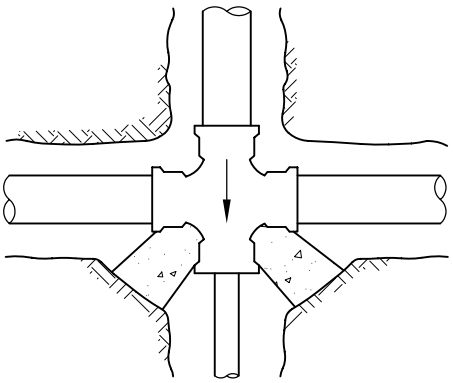
1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER
2. ALL BLOCKING FOR VERTICAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED f'c
4. ALL BLOCKING SHALL BE CONCRETE CL 5 (1 1/2)
5. AFTER INSTALLATION, SHACKLE RODS & TURNBUCKLES SHALL BE CLEANED AND COATED WITH 2 COATS OF ASPHALTIC VARNISH, ROYSTON ROYKOTE #612M OR APPROVED EQUAL
6. SHACKLE RODS SHALL BE FUSION BONDED EPOXY COATED ROUND MILD STEEL, ASTM A 36, WITH THREADS ON ENDS ONLY
7. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS REASONABLE ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED

REF STD SPEC SEC 7-11

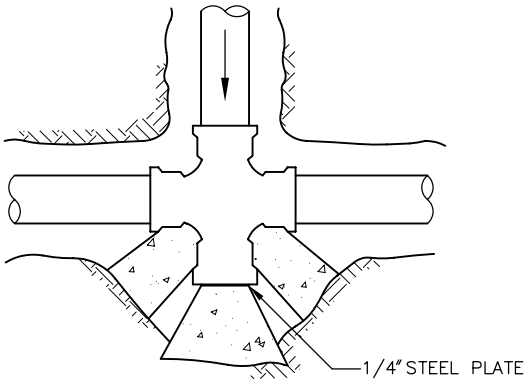
| City of Seattle | NOT TO SCALE | WATERMAIN THRUST BLOCKING VERTICAL FITIINGS |
|---|---|---|

# STANDARD PLAN NO 331a

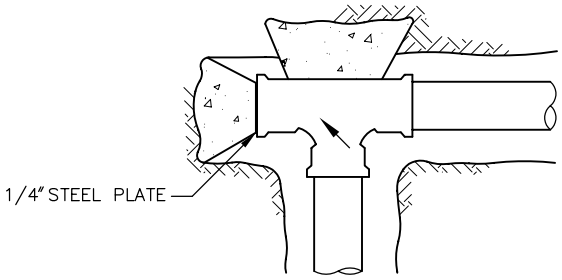
REV DATE: 2003



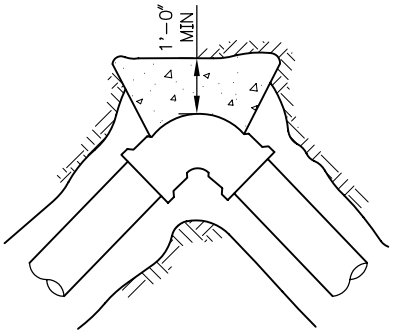
UNBALANCED CROSS



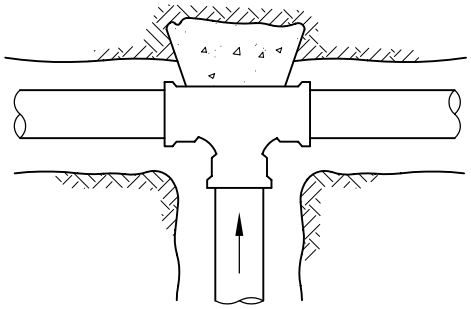

CROSS WITH PLUG



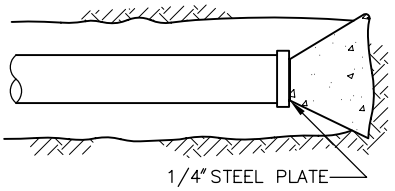

PLUGGED TEE




HORIZONTAL BEND



TEE




PIPE & CAP

THRUST BLOCK AREA IN SQUARE FEET (SEE STD PLAN NO 331b)

| PIPE SIZE | SOIL | FIRM SILT OR FIRM SILTY SAND | | | | COMPACT SAND | | | | COMPACT SAND & GRAVEL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FITTING | 90° BEND | TEE | 45° BEND CAP OR PLUG | 11 1/4° & 22 1/2° BEND | 90° BEND | TEE | 45° BEND CAP OR PLUG | 11 1/4° & 22 1/2° BEND | 90° BEND | TEE | 45° BEND CAP OR PLUG | 11 1/4° & 22 1/2° BEND |
| | 4" | 7.0 | 4.2 | 4.2 | 1.7 | 2.9 | 2.1 | 2.1 | 1.0 | 2.2 | 1.6 | 1.6 | 1.0 |
| | 6" | 13.3 | 9.4 | 9.4 | 3.8 | 6.7 | 4.7 | 4.7 | 1.9 | 5.0 | 3.5 | 3.5 | 1.4 |
| | 8" | 23.3 | 16.7 | 16.7 | 6.7 | 11.7 | 8.4 | 8.4 | 3.4 | 8.8 | 6.3 | 6.3 | 2.5 |
| | 12" | 53.0 | 37.5 | 37.5 | 15.0 | 26.5 | 18.8 | 18.8 | 7.5 | 20.0 | 14.0 | 14.0 | 5.6 |

AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN

ECOLOGY BLOCKS, PER STD PLAN NO 460, MAY BE USED IN LIEU OF POURED-IN-PLACE BLOCKING FOR FITTINGS IN SHADED PORTION OF TABLE

REF STD SPEC SEC 7-11

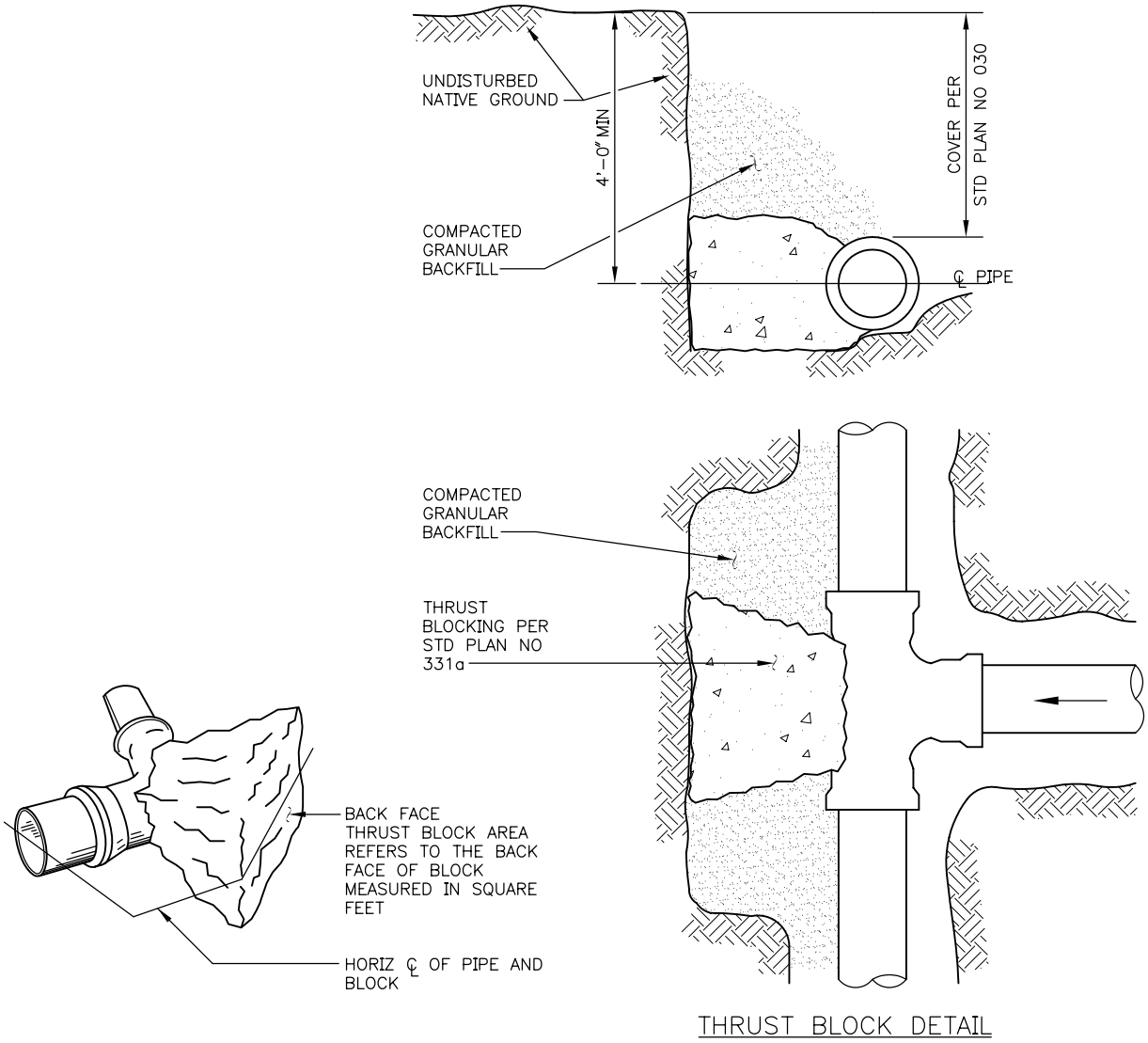
FOR NOTES SEE STD PLAN NO 331b

City of Seattle

NOT TO SCALE

WATERMAIN THRUST BLOCKING
HORIZONTAL FITTINGS

REV DATE: 2003




THRUST BLOCK DETAIL

NOTES:

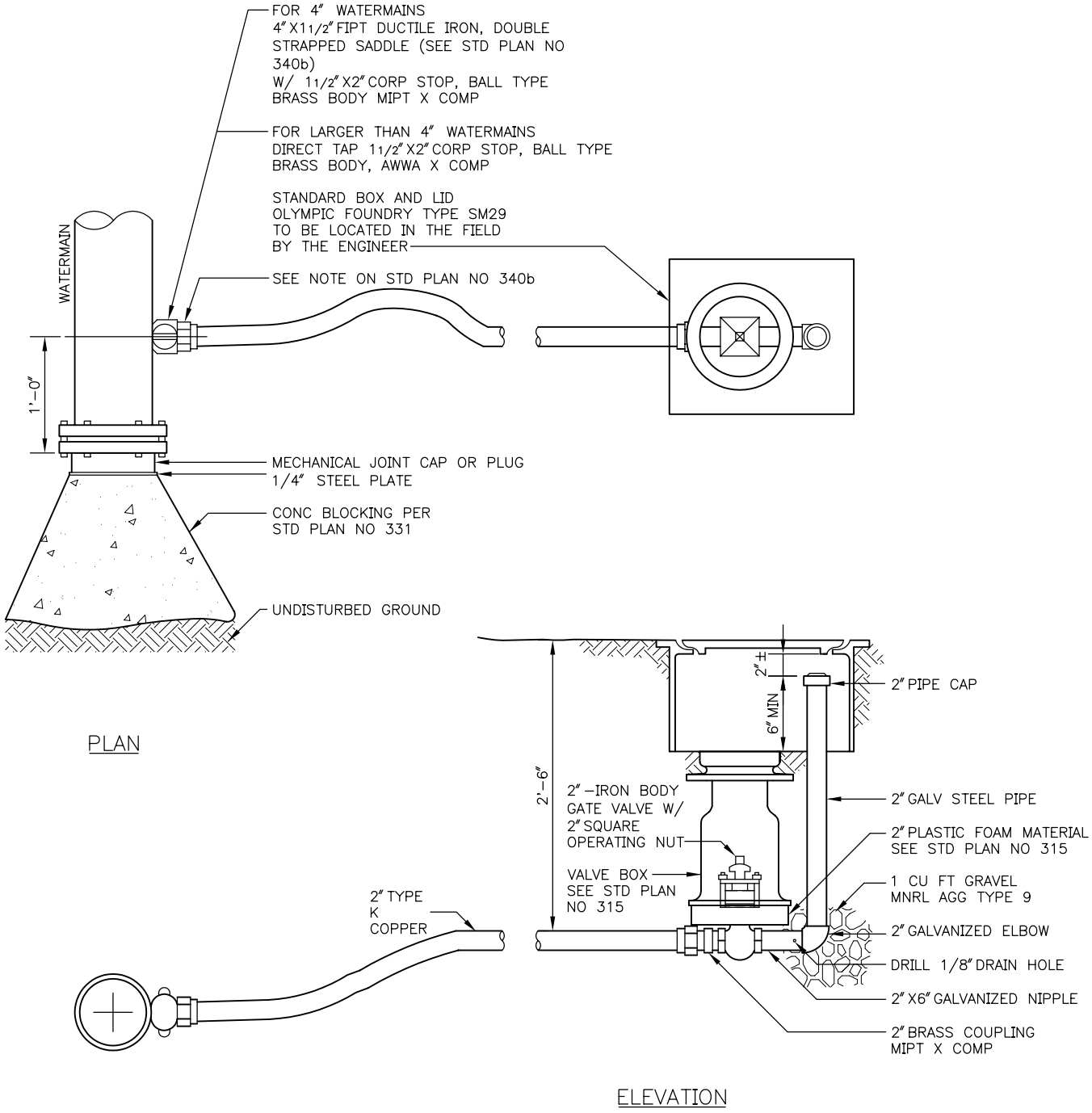
1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER.
2. ALL BLOCKING FOR HORIZONTAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED f'c.
4. ALL BLOCKING TO BE CONCRETE CL 5 (1 1/2).
5. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS. ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.
6. ALL HORIZONTAL BLOCKING THRUST AREAS SHALL BE CENTERED ON PIPE.
7. WHERE POURED-IN-PLACE BLOCKING IS REQUIRED AT A POINT OF CONNECTION TO AN EXISTING WATERMAIN, THE BLOCKING SHALL BE INSTALLED PRIOR TO CONNECTION.
8. TEMPORARY BLOCKING, IF USED, SHALL BE APPROVED BY ENGINEER.

REF STD SPEC SEC 7-11

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | WATERMAIN THRUST BLOCKING HORIZONTAL FITTINGS |

# STANDARD PLAN NO 340a

REV DATE: 2003

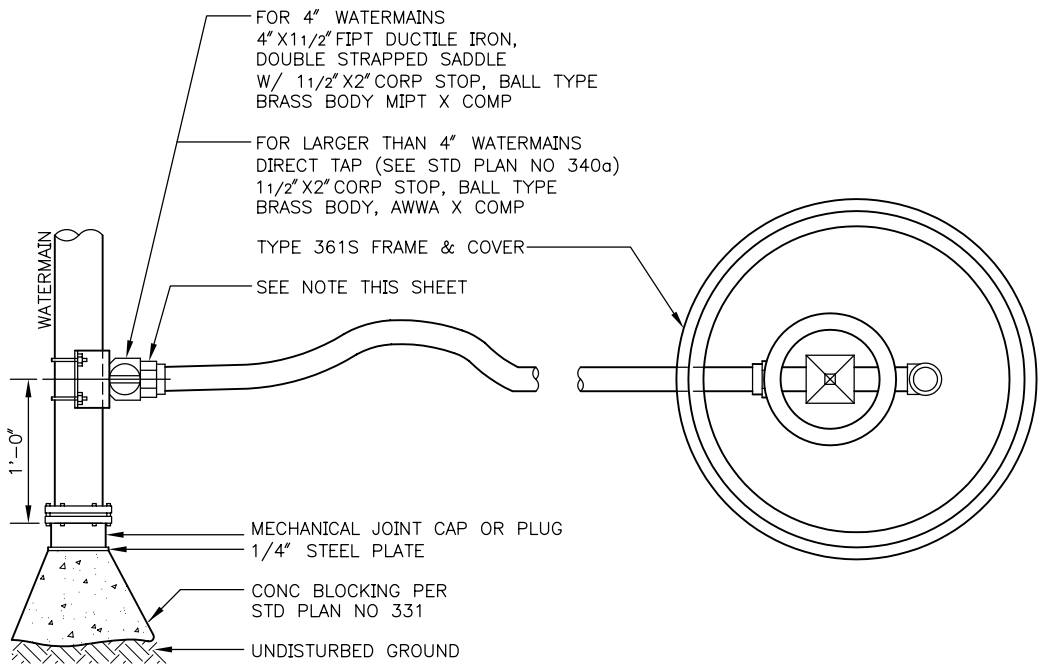



REF STD SPEC SEC 7-11

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | 2" BLOW OFF TYPE A<br>NON TRAFFIC INSTALLATION |

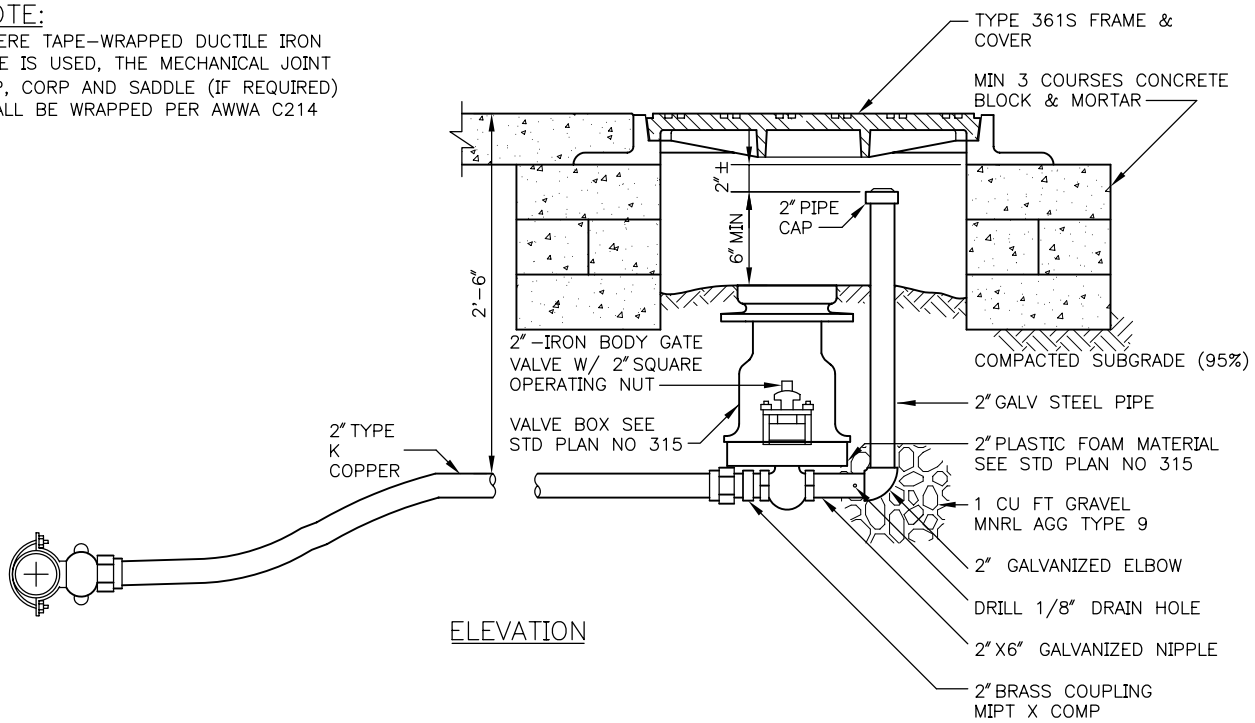
# STANDARD PLAN NO 340b

REV DATE: 2003




PLAN

NOTE:
WHERE TAPE-WRAPPED DUCTILE IRON PIPE IS USED, THE MECHANICAL JOINT CAP, CORP AND SADDLE (IF REQUIRED) SHALL BE WRAPPED PER AWWA C214



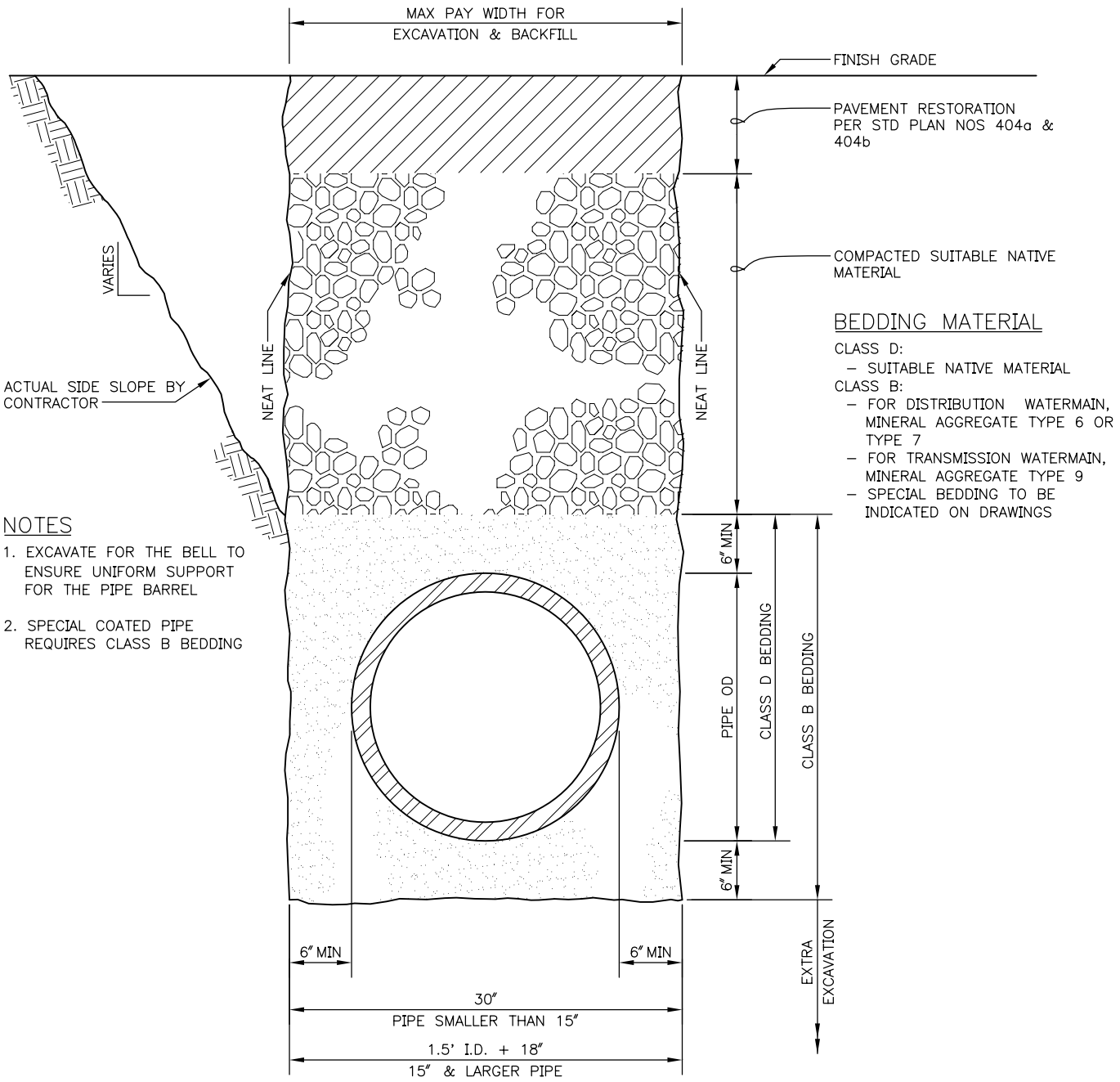

ELEVATION

REF STD SPEC SEC 7-11

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | 2" BLOW OFF DETAIL TYPE B<br>TRAFFIC INSTALLATION |

# STANDARD PLAN NO 350

REV DATE: 2003




## BEDDING MATERIAL

CLASS D:
- SUITABLE NATIVE MATERIAL

CLASS B:
- FOR DISTRIBUTION WATERMAIN, MINERAL AGGREGATE TYPE 6 OR TYPE 7
- FOR TRANSMISSION WATERMAIN, MINERAL AGGREGATE TYPE 9
- SPECIAL BEDDING TO BE INDICATED ON DRAWINGS

## NOTES

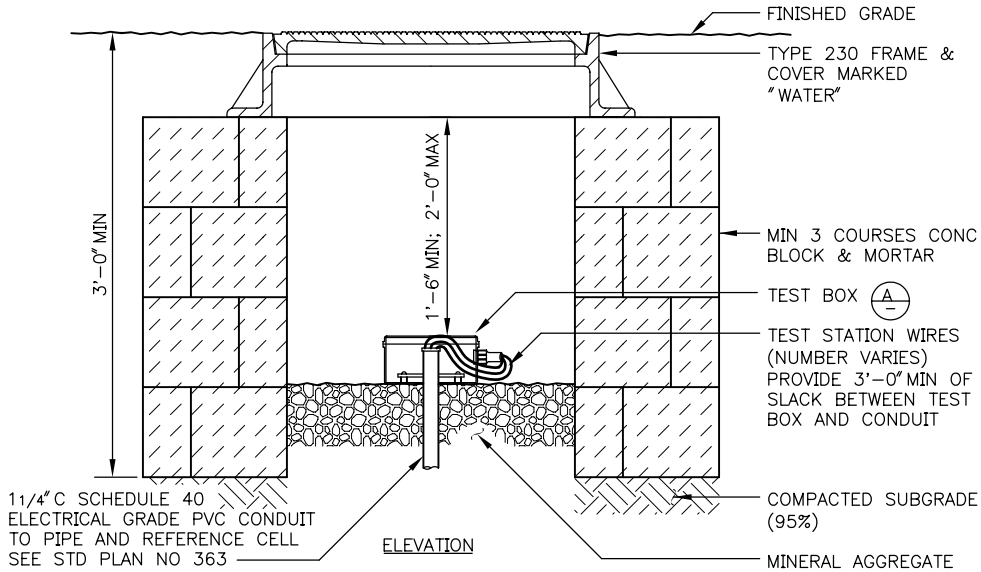
1. EXCAVATE FOR THE BELL TO ENSURE UNIFORM SUPPORT FOR THE PIPE BARREL
2. SPECIAL COATED PIPE REQUIRES CLASS B BEDDING

REF STD SPEC SEC 7-10

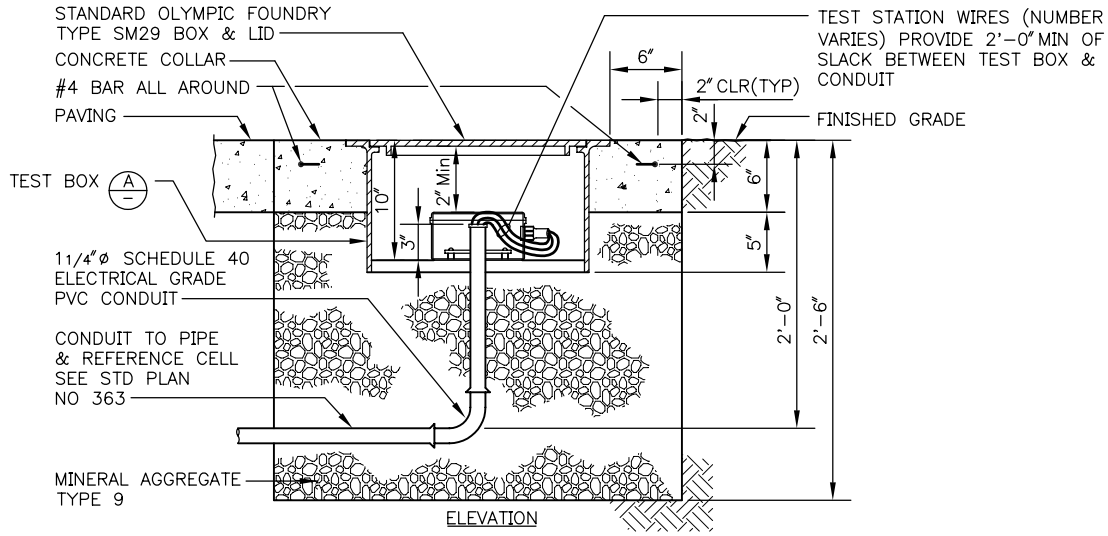
| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | WATERMAIN TRENCH AND BEDDING |

# STANDARD PLAN NO 360

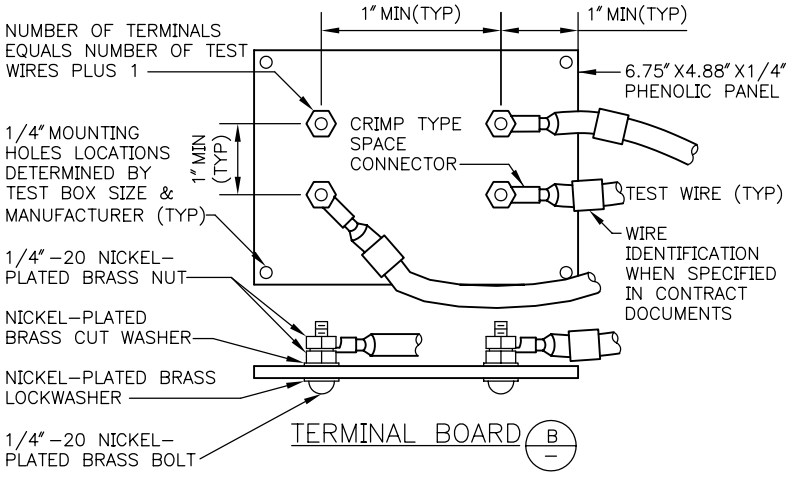
REV DATE: 2003



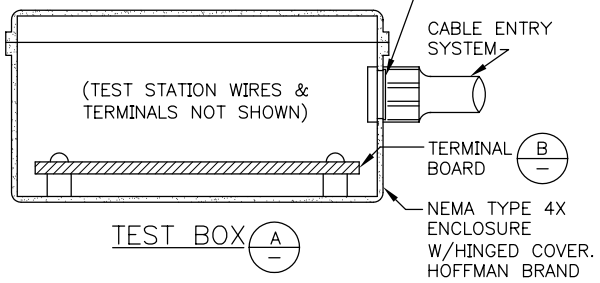

ELECTROLYSIS TEST STATION – TRAFFIC AREA




ELECTROLYSIS TEST STATION – NON-TRAFFIC AREA




TERMINAL BOARD B



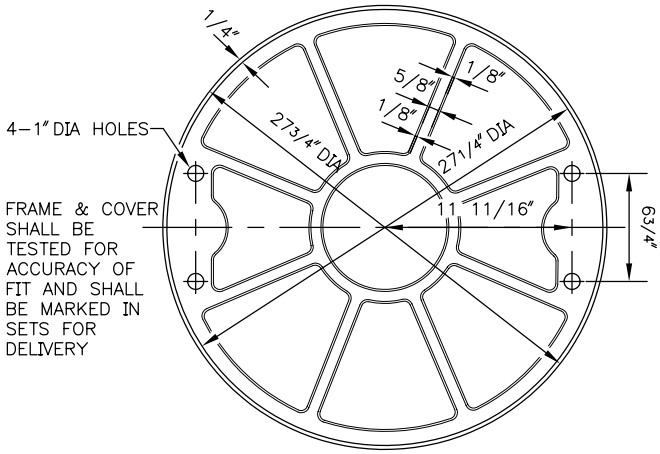

TEST BOX A

REF STD SPEC SEC 7-11

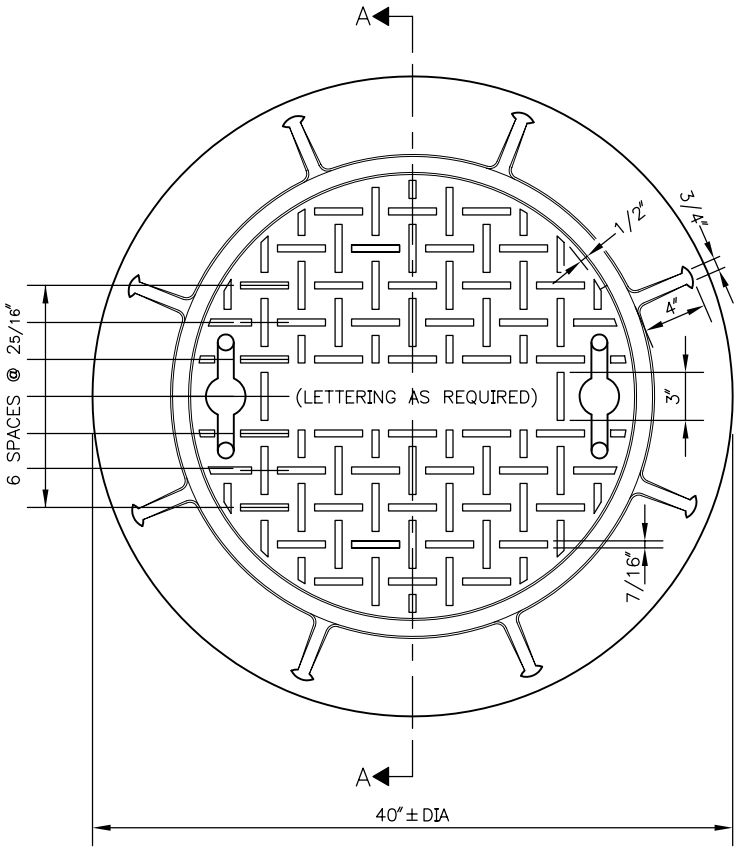
| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | WATERMAIN ELECTROLYSIS TEST STATION |

# STANDARD PLAN NO 361

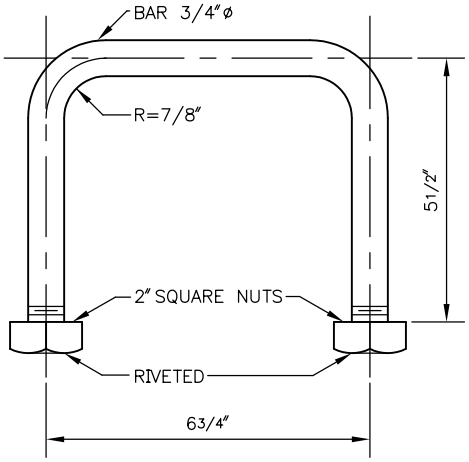
REV DATE: 2003




BOTTOM VIEW




TOP VIEW

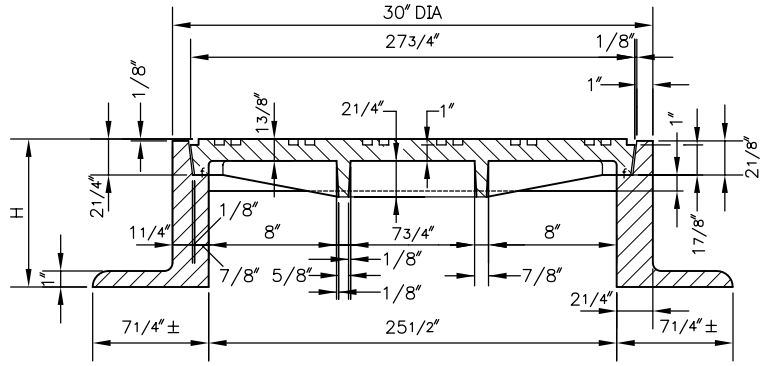



LIFTING HANDLE
(2 REQUIRED)

TYPE 361
H=9 1/4″

DESIGNATE SHALLOW FRAME AS TYPE 361S H=4 1/4″

f=MACHINED FINISH

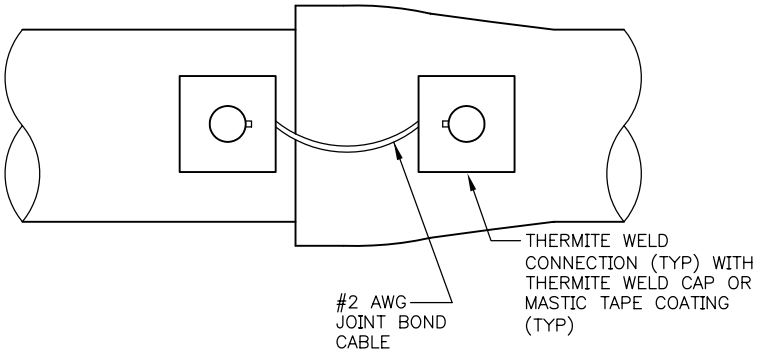



SECTION A–A

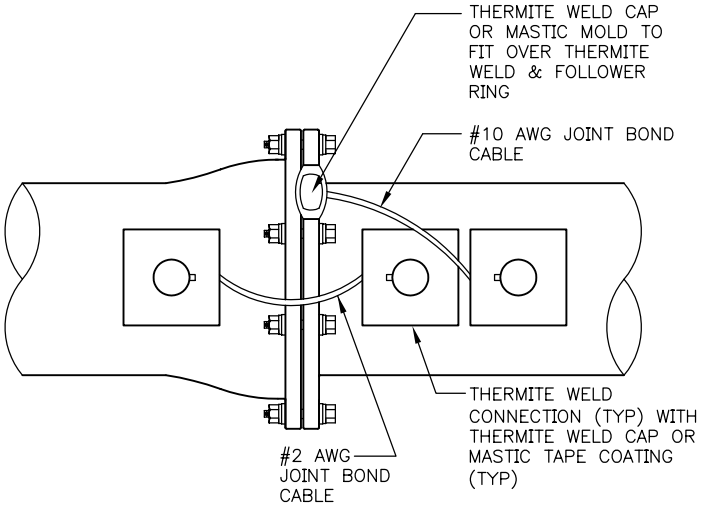
REF STD SPEC SEC 7-12

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | TYPE 361 VALVE CHAMBER FRAME & COVER |

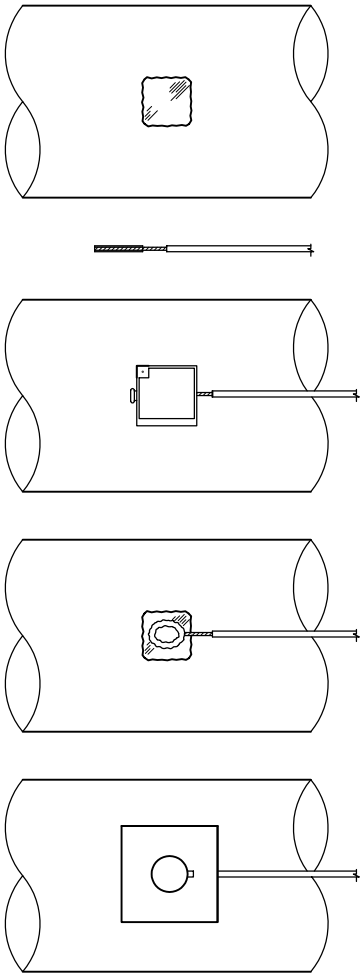
REV DATE: 2003




SLIP JOINT BOND CONNECTION




MECHANICAL JOINT BOND CONNECTION



CONNECTION SEQUENCE:

1. REMOVE PIPE COATING TO BRIGHT & CLEAN METAL
2. STRIP INSULATION FROM TEST STATION WIRE, INSTALL ADAPTER SLEEVE
3. HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE
4. REMOVE SLAG AND ALLOW TO COOL
5. 16 OUNCE HAMMER TEST PER STD. SPEC SEC 7– 11.3(15)01
6. FINAL CONNECTION TO BE MADE WATERTIGHT WITH MASTIC COATING OR PREFORMED THERMITE WELD CAP

THERMITE WELD CONNECTION

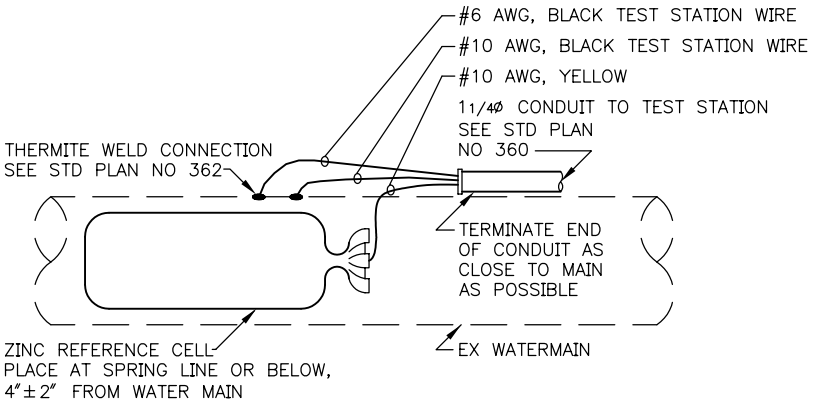
REF STD SPEC SEC 7-11

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | JOINT BONDING FOR DIP WATERMAINS & JOINTS BONDING DETAIL |

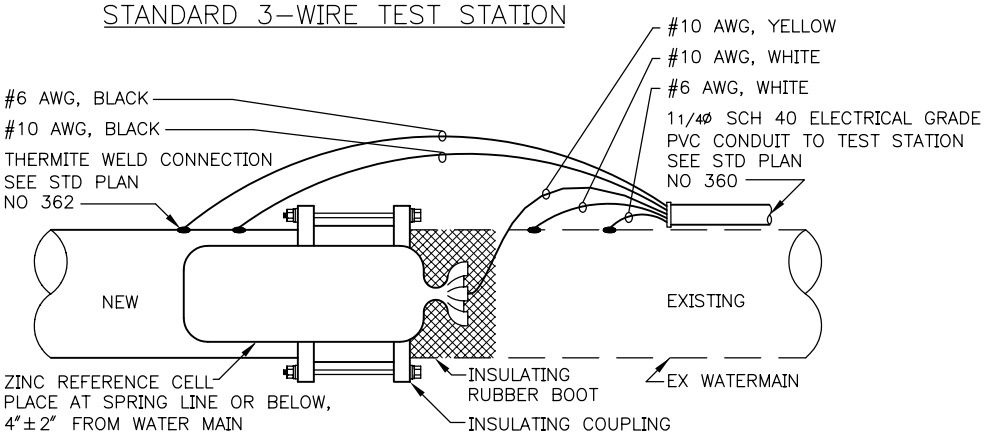
# STANDARD PLAN NO 363

REV DATE: 2003

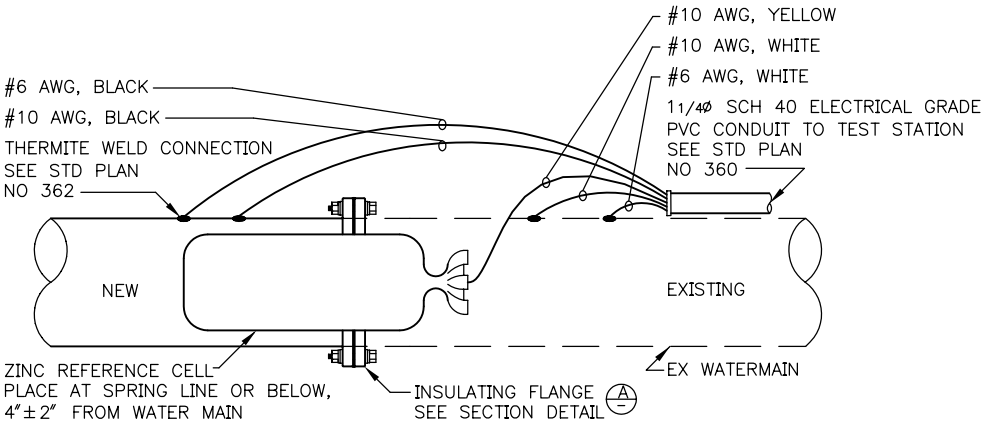
NOTE:
WIRE INSTALLATION PER
STD SPEC SEC 9-30.12(3)



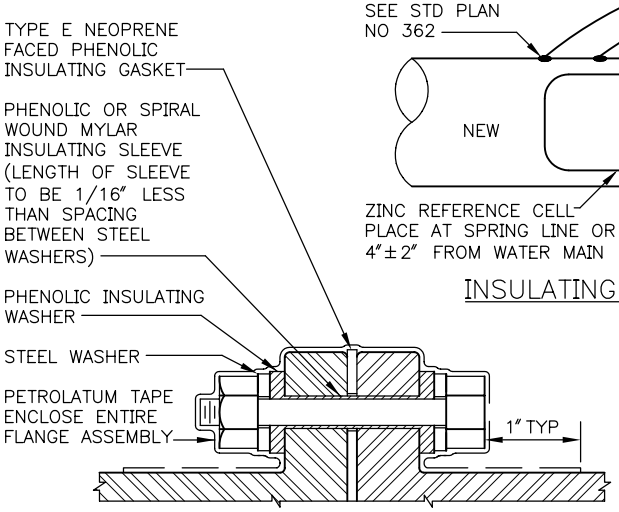

STANDARD 3-WIRE TEST STATION




INSULATING COUPLING 5-WIRE TEST STATION




INSULATING FLANGE 5-WIRE TEST STATION




(A) INSULATING FLANGE SECTION DETAIL

REF STD SPEC SEC 7-11.3(15) & 9-30.12

| | | |
|---|---|---|
| City of Seattle | NOT TO SCALE | ELECTROLYSIS TEST STATION WIRE INSTALLATION DETAILS |